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UNITED STATES GOVERNMENT

Memorandum

TO : Gary Seevers

DATE: October 29, 1974

FROM : G. Edward Schuh 9755

SUBJECT: Meeting of Export Group on October 24, 1974

Attached please find the material that was distributed at this meeting, which was held in Denny Ellerman's office. We did not discuss any specific grain orders. Primary focus was on the attached NSC proposal, which is in the form of a memo to Kissinger.

The only strong opposition to this proposal was from Jules Katz, who argued that State was against any proposal which attempted to solve OPEC-caused balance-of-payments difficulties. He thought they hedged the central question, which was how to get oil prices down. He noted that there is considerable shifting of political power associated with the current capital flows, and that that is their primary concern.

Bell raised a question about the suggestion for Iran to finance world grain reserves. He argued that this went counter to our policy, which was for countries to hold their own reserves. He was placated with the observation that we couldn't really prevent Iran, for example, from helping India to build their stocks.

After considerable discussion the proposal was finally approved.

The export-sales report is attached. You will note that sales as of the week ending October 13 are above USDA estimates in every case except wheat, and in some cases we are substantially above. Moreover, Elmer Klumpp tells me that exports these last two weeks have really been running at a fast rate.

Other relevant data on the export situation are as follows:

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for

- 1. It is now believed that Indian import requirements will be 6 million tons. They now have 4.6 million tons of this lined up, with 2.6 million from us, 1 million from the EEC, and 1 million from Canada, Argentina, etc. They lack 1.4 million tons, which is approximately \$250,000,000 at current prices. Butz is supporting additional sales to Iran to help close this gap, and would be willing to go up to 300,000 tons for this purpose. Moreover, it was reported that Butz would approve up to an additional 1 million tons of wheat for India from our markets. And Katz indicated that Kissinger was still thinking 1 million tons of P.L. 480 in total for India.
- 2. Bell reported that the U.S. will have 2 million tons of rice for export this year. Sales have been running quite high, and 1 million tons have already been sold. (This casts doubt on the possibility of substituting rice in the P.L. 480 program.)
- 3. Attempts are being made to have Iran pick up the 150,000 tons of wheat which we have committed for Sri Lanka by making purchases from Argentina. Our shipment would then be diverted to India.
- 4. It appears that Russia is in much more serious trouble than anyone believed. They have now purchased some 5.9 million tons, made up from the following sources:

U.S. 2.2 million tons
Argentina 1.1 million tons
Australia 1.0 million tons
Canada 0.6 million tons
Sweden Sweden 0.9 million tons

Bell said that all indications are that they are looking for 7-8 million tons in total, and that they will be able to buy some from the EEC.

An important item for discussion at the meeting was the content of Kissinger's speech when he opens the World world wood Conference in Rome There has been a lot of scurrying around this last week trying to find a copy, but no one was able to come up with one. The fear is that Kissinger will make policy with his speech and that only State Department types will have had an input into it.

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Katz implied that the speech had not been written, but that there was no cause for concern since there was no one in Kissinger's delegation who could put much content into a speech that presumably was being drafted while he traveled. He went on to say, however, that Kissinger would endorse the Boerma position on food reserves, and gave enough other content to bely his comment that the speech had not been drafted. Concern was expressed over the fact that Kissinger's speech might be in contradiction with the position papers for the conference that are being prepared here in the bureacucracy.

Katz also reported that the \$1.5 billion level for P.L. 480 had been approved within the government. Katz was somewhat surprised at the surprise that comment evoked among the group.

Finally, I am attaching the USDA stocks report on grains. You will note that with the exception of barley, stock levels are all above the levels expected by the USDA, and in the case of corn, oats, and wheat, substantially above. This is a nice windfall gain, and may explain in part why commodity markets were rather soft this past week.

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Attachments cc: AG, WF, JD, MS

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Authority NLF MR 83-3, # 1

Iran/US Agricultural Cooperation

Your progression from the food deficit subcontinent, to oil-rich Iran and then to the WFC provides the setting for an initiative which would contribute to the solution of the world food problem and begin a process of cooperation with Iran and, perhaps, other OPEC nations.

In your meeting with the Shah you might build on two major themes in your speech:

- -- increased food production among the LDC's as the long-term solution to the world food problem; and
- (a) world grain reserves and (b) food aid for the most hard pressed.

 (Asubtheme of this point is that increased American production will permit the stocking of reserves and the provision of food aid.)

You could pursue three areas of US, Iranian (and perhaps OPEC)

Cooperation consistent with and supportive of those themes:

A joint US-Iranian food aid package for the Asian subcontinent. You could propose to the Shah that he match the approximately \$250 million of PL-480 shipments which we propose to send to India, Bangladesh, Pakistan and Sri Lanka, to form a half billion dollar food aid package. (In India's case, this could mean grants or con-

Association with the United States in such a venture would appeal to the Shah's pride. The Shah will find additional justification in the presence of two Moslem nations among the recipients. The package's main value to you will be to highlight the potential for future cooperation suggested by combining OPEC financial resources with the American agricultural surplus and technology to help food deficit areas.

Cooperation to promote increased food production in the LDC's: В.

- Agricultural Research -- The US could assist Iranian efforts to contribute to LDC agricultural research and manpower training. This would emphasize adaptation of existing technology to conditions of food production in the LDC's. An Iranian International Research Foundation to fund and coordinate such activities could work closely with, and draw on the agricultural expertise of, AID. This program could establish Iran as a major contributor to solution of the world food problem.
- Fertilizer -- Iran could launch a major effort to build plants to use flared gas to produce the fertilizer for LDC's.

C. Support for world food security Grain Reserves -- Iran could participate in the financing or holding of the world grain reserves, thus contributing to the

scheme which you will propose in Rome. Iran and others would buy part of our anticipated agricultural surplus in the coming years to build these reserves.

-- Food Aid -- The above-mentioned joint US-Iranian food aid

package for the subcontinent would show the way on this front.

Iran could agree in principle to continue efforts in the future.

Your approach to the Shah could be that:

- You have come from India where you were impressed by the magnitude of the food problem in the subcontinent, which is Iran's neighbor, etc.
- -- You are going to Rome to address the World Food Conference.
- Iran has a payment surplus. The US has a wealth of expertise in the area of agriculture and an agricultural surplus. We can help deal with the world food problem by combining our resources.
- -- We propose that Iran join the United States in a broad cooperative approach to the world food problem. (Cooperation in this relatively non-controversial area can set the stage for broader cooperation between the industrial nations and the OPEC nations.)
 - -- If the Shah would endorse this proposal, you can either refer to it in Rome, or perhaps announce it jointly in Rome with the Iranian delegation.

[If Iran matched our PL-480 program to these four countries, an additional million tons of US wheat would be required. This quantity is small in relation to total supply and demand; and, in the case of all but Pakistan, some substitution of rice for wheat could be made to lessen the impact on wheat supplies. Alternately, in the case of India, Iran might pick up the tab for part or all of the existing Indian purchases of 2.1 million tons of wheat, which would help out India's balance of payments without placing new demand on US supplies.]

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Outstanding Export Sales Plus Cumulative Exports, Marketing Year 1974/75

Item	As of: Sep. 15: Sep. 22: Sep. 29: Oct. 6: Oct. 13							
	: Sep. 15	: Sep. 22	: Sep. 29	: Oct. 6	: Oct. 13	3		
Wheat (mil. bu.)	•							
Outstanding sales -	•		•	•				
Known destination	325.5	010						
Unknown destination	: 63.3	312.2	312.0	351.7	380.5	5		
Other1/	12.1	66.4	79.0	62.0	53.3			
Subtotal	400.9	15.6	15.3	15.0	16,4			
Cumulative exports	228.0	394.2	406.3	428.7	450.2			
Total above (grain)	The state of the s	249.4	273.6	291.6	310.6			
USDA export estimate -	628.9	643.6	679.9	720.3	760.8	3		
Grain	•			•		.*		
Grain and products	•		_		900-100	1Q		
para para para para para para para para	•		•		950-(105			
Corn (mil. bu.)	•							
Known destination	. 001.0				•			
Unknown destination	831.2	836.3	842.1	909.0*	950.4			
Other1/	223.4	225.2	207.4	177.3	145.6			
Total reported sales	4.0	4.0	4.0	3.4	3.1			
Cumulative exports	: 1058.6	1065.5	1053.5	1089.7*	1099.1			
Total			-	9.6	24.1			
USDA export estimate	: 1058.6	1065.5	1053.5	1099.3*	1123.2			
obbit export estimate	:	•		•	750-900			
oybeans (mil. bu.)	:				750.500	`		
Known destination	:							
	: 479°4⊁	477.2*	469.6	510.6	528.1			
Unknown destination Other $\frac{1}{L}$: 117.9	.114.4	118.4	91.4				
	2,4	2,2	1.5	2,5	86.3 8			
Total reported sales	599.7*	593.8*	589.5	604.5				
Cumulative exports	12.7	19.3	30.2	35.8	616.4			
Total	612.4*	613.1*	619.7	640.3	42.5			
USDA export estimate	:		025.7	0.40.2	658,9 485-515			
	:				403-515	6		
oybean Cake & Meal (1000 M.T.)			• •					
Known destination	4751.8	5411.2	5837.4	6730.8	7022.9			
Unknown destination	3779.5	3093.7	3167.4	3086.7		:		
Other1/	0	0	0	13.4	2898.9	, .		
Total	8531.3	8504.9	9004.8	9830.9	13.9			
Cumulative exports		•	J 0 0 4 6 0	40.0	9935.7			
Total	8531.3	8504.9	9004.8		77.0			
USDA export estimate	:		2004.0		10012.7			
•					450-5750			
bybean Oil (mil. 1bs.)	Saladani e.	وزواج جانوك بالمارات	sei t					
- acaethacton	321.2	395.9			***			
Unknown destination	369.1	355.8	402.7	. 507.6	505.4			
Other1/	27.3		354.7	358.0	391.1			
Total	717.6	27.3	27.3	79.8	79.8			
Cumulative exports	747.0	779.0°	784.7	945.4	976.3	-		
Total Total Total State of the Control of the Contr	717.6	770 0	**	1.5	18,7			
USDA export estimate	717.0	779.0	784.7	946.9	995.0	-		
				. (000-1100			
	-							

^{1/} Optional origin sales and exports for own account.

Revised.

_age 2 -- Outstanding Export Sales Plus Cumulative Exports, Marketing Year 1974/75

Item		:	•				·.
rem			Sep. 15	San 22	As of		
rain Sorghum (mil. bu.) Known destination		:		. sep. 22	: Sep. 29	: Oct. 6	: Oct. 1:
Unknown destination Other 1/		:	125.7 18.1	127.1 18.1	135.5 20.8	160.8 7.4	TOT .
Total reported sales		:	28.1 171.9	27.1 172.3	27.1	28.6	30.4
Cumulative exports Total	-	:_	-		183.4	196.87 2. 1	* 198.0
USDA export estimate	• •	:	171.9	172.3	183.4	. 198.9	5.0 203.0
rley (mil. bu.) Known destination		:				÷	100-150
John destination Other 1/	,	:	30.3	32.3	31.7	32.0 2.2	34.1
Total reported sales		:	10.5 43.0	9.1 43.6	7.9	7.1	. 1.7 7.6
umulative exports Total		:	6.6	6.6	41.8 7.6	41.3 8.4	43.4
SDA export estimate	2.4.	:	49.6	50,2	,49.4	49.7	<u>8.6</u> 52.0
s (mil. bu.) nown destination	·	: :	٠.		• • •		25-40
nknown destination		: :	10.9 5.6	10.9 5.6	10.8 5.6	11.1 5.6	11.0
Total reported sales	1	:	$\frac{1.8}{18.3}$	1.8	1.8 18.2	1.8	5.4 2.4
Total	•	<u>:</u>	5.3	5.3	5.4	18.5 5.4	18.8 5.5
DA export estimate	• .	:	23.6	23.6	23.6	23.9	24.3
	·	<u>:</u>					20-35

Optional origin sales and exports for own account.

Revised.

(million bushels)

N. T. C.						
I_T_E_M	1973/74	R N 1974/75	W H E		SOYBE	
RTS THROUGH OCTOBER 18	50.7	46.5	1973/74 456.7	1974/75 304 . 7	1973/74 24.9	1974/75
AL EXPORTS: Frent USDA estimate (mid-point) vel if exports continue at-	1,225	825	1,107 <u>3</u> /	1,000	542 <u>3</u> /	500 -
Year-to-date rate	879 1,246	806 728	1,482 1,591	988 1,025	187 187	286 304
LY AVERAGE: rketing year ports through October 18 test 6 weeks eded remainder of year to achieve annual total	23.6 16.9 24.4 24.0	15.9 15.5 13.9 15.9	21.3 28.5 31.5 18.1	19.2 19.0 20.0	10.4 3.6 3.6 11.5	9.6 5.5 5.9;
RTS FOR WEEK ENDING:	1973	1974	1973	<u>1974</u>	1973	<u>1974</u>
SEP. 13.: 20. 27. DCT. 4. 11. 18.	22.1 33.2 26.3 27.3 19.9 17.5	8.8 9.8 18.2 20.7 10.7	37.5 35.8 30.2 26.7 24.7 33.9	18.5 19.9 24.6 22.9 17.1 17.1	1.0 1.8 1.4 2.5 5.5 9.7	3.6 6.4 4.9 5.6 4.8 9.9
	•	· .				

Marketing years: corn, Oct. 1-Sept. 30; Wheat, July 1-June 30; soybeans, Sept. 1-Aug. 31. . Grain only.
Actual.

Reported Undelivered Export Sales and USDA Export Estimates

Item	: rear as of	:1973/74 Marketing:1974/75 Marketin : Year as of : Year as of : October 14; 1973: October 13, 1974				
DUEAT (mil b.)		5. october 15, 1972				
WHEAT (mil. bu.)	:					
Reported sales:	:					
Known destination	: 657.8	380.5				
Unknown destination	: 232.8	53.3				
Other 1/	16.2	16.4				
Total reported sales	906.8	.450.2				
Cumulative exports	419.8	310.6				
TOTAL ABOVE (grain) .	1,326.6	760.8				
USDA export estimate:		760.8				
Grain only	: $1,107\frac{2}{}$	900-100 <u>03</u> /				
Grain and products	$1,148\overline{2}/$	950-1050 <u>3</u> /				
CORN (mil. bu.)						
Known destination	951.0	•				
Unknown destination	255.7	950.4				
Other <u>1</u> /		145.6				
Total reported sales	$\frac{3.7}{1,210.4}$	3,1				
Cumulative exports	33.3	1,099.1				
TOTAL ABOVE		24.1				
USDA export estimate	: 1,243.7	1,123.2				
	1,225 <u>3</u> /	750-900 <u>3</u> /				
SOYBEANS (mil. bu.)	•	·				
Known destination		•				
Unknown destination	535.9	528.1				
Other1/	95.6	86.3				
Total reported sales	1.3	2.0				
Cumulative exports	632.8	616.4				
TOTAL ABOVE	13.0	42.5				
USDA export estimate	645.8 542 ² /	658.9				
	34221	485 - 515 <u>3</u> /				
SOYBEAN CAKE & MEAL (1000 M.T.)	•	6.0				
Known destination	5,264	-				
Unknown destination	1,632	7,022.9				
Other1/	· _	2,898.9				
Total reported sales	1	13.9				
Cumulative exports	6,897	9,935.7				
TOTAL ABOVE	0	77.0				
USDA export estimate Worked at the Market was	6,897	10,012.7				
· · · · · · · · · · · · · · · · · · ·	5,5503/	5450-5750 <u>3</u> /				
OYBEAN OIL (mil. 1bs.)	· ·	•				
Known destination	•	•				
Unknown destination	263.6	505.4				
Other1/	122.4	391.1				
Total reported sales	0	79.8				
Cumulative exports	386.0	976.3				
TOTAL ABOVE	0	18.7				
USDA export estimate	386.0	995.0				
Series of the second se	: 1,475 <u>3</u> /	900-1100 <u>3</u> /				

Optional origin sales and exports for exporter's own account.

7/ Actual exports for the marketing year.

WHEAT: Outstanding Export Sales, Marketing Year 1974/75,
Compared With Outstanding Export Sales Plus Cumulative
Exports, Marketing Year 1973/74
(GRAIN ONLY)

Item	:	1973/74 : Marketing: Year :	Marketing Sep. 29	Year 1974 Oct. 6	/75, as of Oct. 13	: Change from Oct. 6
Wheat (mil. bu.) Known destinations1/	•	:		t de de de la composition della composition dell		
European Community .	. :	90.7 :		122.3*	127.0	+4.7
Other Western Europe	. :	24.8:		15.5	25.0	+9.5
Eastern Europe	:	31.3:	-	20.0*	23.3	+3.3
U.S.S.R.	•	100.1:		2.5	2.5	0
Japan Parakhiran Gali	:	112.5:	-	62.5*	59.6	2.9
Republic of China	:	31.2		8.5	8.5	: 0
P.R.C.	:	117.2:	. • .	66.3*	66.3	. 0
India	:	58.8:		80.3*	73.4	-6.9
Other Asia & Oceania	<u>.</u> :	215.6:		138.6*	155.9	+17.3
Africa	. :	116.7:		26.7	27.7	+1.0
Western Hemisphere	:	207.0:	73.9	87.7*	88.1	+0.4
Total known	:	1,105.9:	568.9	630.9*	657.3	+26.4
Canadian transshipments, etc.	:	0 :	16.7	12.4*	33.8	+21.4
Unknown destination2/	:	0:	79.0	62.0	53.3	-8.7
Other <u>3</u> /	:	<u> </u>	15.3	15.0	16.4	+1.4
TOTAL	` .	1,105.9	679.9	720.3	760.8	+40.5

 $[\]underline{1}$ / Outstanding export sales, plus cumulative exports.

Outstanding export sales.

Outstanding export sales -- optional origin sales and exports for own account.

Revised.

AND GRAIN SORGHUM: Outstanding Export Sales, Marketing Year 1974/75, Compared with Outstanding Export Sales Plus Cumulative Exports, Marketing Year 1973/74

		•			-	
Item		1973/74 : Marketing: Year :	Marketing Sep. 29	Year 1974 Oct. 6		: from
ORN (mil. bu.) Known destinations1/ European Community Other Western Europe Eastern Europe U.S.S.R. Japan Republic of China P.R.C. Other Asia & Oceania Africa Western Hemisphere Total known** Canadian transshipments, Unknown destination2/ Other3/	etc.	1ear (Prel.) : 374.0 : 157.2 : 36.7 : 121.3 : 256.7 : 29.3 : 114.6 : 1,195.2 : 29.8 : 0 : 0 : 0	476.5 25.5 33.9 1.9 248.6 3.5 0 28.5	500.9* 33.4 53.4* 4.6* 257.3*	522.9 45.7 60.8 4.7 256.4 0.9 0 31.7 4.6 34.7 962.3 12.2 145.6	: Oct, 6 : : : +22.0 : +12.3 : +7.4 : +0.1 : -0.9 : -1.5 : 0 : -0.9 : +4.0 : +1.3 : +43.7 : +12.2 : -31.7
TOTAL	:	1,225.0:		1,099.3*	3.1 1,123.2	+23.9

^{1/} Outstanding export sales, plus cumulative exports.

^{2/} Outstanding export sales.

^{3/} Outstanding export sales -- optional origin sales and exports for own account.

^{*} Revised.

^{**} May not add due to rounding.

Stocks Report from USDA Estimate

<u>Million Bushels</u>

Corn			+	53
Sorghum			+	6
Barley		•		5
Oats ·			+	40
Wheat			+	50

10/24/74

LETTERS TO
THE TECH
4/29/75
THE" What
Puniples
on Iran?

An Open Letter to the MIT Community:

We, members of the Chaplaincy at MIT, are disturbed about the trend at MIT, represented by the recent contract made by the Institute with the Iranian government to train 50 Iranian graduate students in Nuclear Engineering. There is a new departure from policy here which disturbs us: namely, making direct contracts with a government for the education of professional, technological ex-

pertise.

MIT is an institution heavily dependent upon research grants from the Government and from industries, considerably more so than most universities in the country. We worry about the drift into even greater dependence upon powers external to MIT whether within or cutside American society using and misusing the Institute. We are concerned about the independence and integrity of an institution which we care about. We would like to see its independence increased, and a clearer articulation of the principles by which it will enter into an education contract. To whom will we sell our expertise is a question that

responsible answer.

In the present circumstances we are worried about the implications of MIT policy with regard to the Iranian contract. We worry about contributing to potential nuclear proliferation. There are those who say that all industrial nations now have nuclear bomb potential, but we resist any moves which contribute in any way to that everpresent potential,

demands a thorough and morally

MIT is an institution that stand for academic freedom and free inquiry. Whether or not Iran is more or less oppressive than other nations with which MIT deals, there is evidence that students and faculties at Iranian Universities who dissent against the present government's policies suffer great persecution. We know that they have been jailed, tortured, and killed. We raise the question, therefore, whether it is moral for MIT to support a government which perpetrates this kind of outrage against persons and academic freedom.

Does not MIT's stance imply that we condone such policing that we condone such policies? We ask why MIT is doing this? Is it because we need the money? Is it because we believe that the Iranian government needs and deserves our help? Is it because we are serving. United States interests? What is the reason? We

when not heard a clear answer. We reject the argument that technology is by nature good and elevating. We are concerned with the uses of technology. We feel that we must be responsible for the power that we have at our disposal.

So again we reiterate the question: on what principles does MIT stand? Are there any conditions under which we would not train the best brains of another nation? Are there any conditions under which MIT would refuse a contract? Should

not some apparatus of respections binty be set up in our academic community to address this prolem, and examine the implication of contracts with governments?

The independent academicand moral integrity of MT needs clearer articulation than has had. The circumstances of the present demand it.

Rev. John Crocker, Jr Rabbi Mel Gottlier Fr. Robert Morar Steven Murph Pastor Constance Perver April 28, 1973

Irun Striky

We have been treated lately to a strange and demoralizing spectacle: the last summer and in February Amnesty Agency for International Development to Sensitive matter than teaching English,

sight of the American academic "community" wagging its tail after a tyrant and furiously eager to rut with dictator ship all in return for money--the fabu-lous petro-dollars of the Shah. One is torn between appreciating the ridiculous In this or responding with nausea and the moral outrage it deserves. The Shah of Iran, the Shah of Shahs, in vestments and spangles and sceptre and ribbons, glorified in full color photo in the New York Times Sunday rotogravure, and continuously foisted on the public as some delightful "movie-star king," is i fact an adventurer who was run out of his own country only to return to usurp its constitutional government and come to power through a CIA coup. And despite the propaganda for the Shah that we are fed on every hand; the attempts to present him as a benign monarch, a 'gracious host with a lively sense of humor" full of the "profound intelligence of an enlightened ruler" in William Randolph Hearst Jr.'s unctuous series of interviews, he has run his country as a police state ruled by a draconic secret police, a fascist nightmare where elaborated rate torture is commonplace and there are over twenty thousand political prisoners.

The Shah has imprisoned Iran's leading playwright's, its most distinguished Islamic scholars, a good number of filmmakers and poets and raft of profes sors. So there is something peculiarly bizzare in the notion of our academics courting him for donations. There is no such thing as academic freedom in Iran, freedom of speech, the free exchange o ideas (the Shah has just suppressed ninety-five percent of all periodical pub lications), or any semblance of civil rights (the Shah has just decreed Iran a one-party state) or due process in the The secret police everywhere. In every hotel lobby, every government office, every university classrooms.
And they are on the watch every moment There are 70,000 of them, one for ever |450 people. But the SAVAK officials themselves cheerfully concede that the figure is only a fraction of their true number, only a small percentage of the myriad of "informants" on tap which is estimated as being as high as one in eight of the population, one in eight set to spy upon the others.

International learned of her death by tor She was pregnant. There were no records kept of her arrest. The charges against her. Nor the trial. Nor the sentence. But that is typical. There is Vida Tabrizi, a young sociologist who
"disappeared" on her way home from th university seven years ago. She has een tortured until she no longer has any sensation in her hands and feet. It seems she did research on the customs

and folkways of the peasants. It is confusing that American academics should solicit university funds from ı man who has shown every contempt for he academy. The Shah has frequently closed the campuses in his own country nd posted soldiers and tanks at their doors. Scholars and intellectuals are jailed and tortured for expressing any independent views. I mention Vida Tab zi only because she is one out of thousands, the thousands of men and women hose screams tear at the walls of Evin Prison, the nefarious "facility" where CIA trained "interrogators" torture hose arrested in "inquiry rooms." The ortures begin with beatings and go on to alacca, the flogging of the soles of the eet, extraction of the finger and toe nails, the use of electric shock to the enitals common among American meth ods in Vietnam, even the thrusting of oroken glass into the anus of a prisoner suspended by the wrists from a beam. Prisoners are also subjected to "psychoogical" tortures such as being forced to or being elaborately prepared for their execution and led blindfolded to the edge of a freshly dug grave and then "given mother chance.

The history of American involvement with this sort of savagery, even American academic involvement, is a sordid iffair. We are already the executioners nterrogation "personnel" in Iran are CIA trained in origin and have learned the methods of their crimes from Amer icans just as they came into power through CIA coup. The American Academy has in the past been used over and over to provide services to such govern ments. The officials of the current repressive regime in Indochina, officials who in their rise to power followed and perhaps participated in Sukarno's over-(brow, were trained in California uni-Anything can happen and it does all the versities and hold Berkely Ph. D.'s.

Line Beenle "disappear" Simian Sa. Until 1960 the University of California at

supply "personnel" to support the Royal Thai government in its efforts to "concontrol and eliminate communists, complete with the obligatory "informed studies" and "expertise" and "consul ants" and the invidious "political scien ists" adept at "counter-insurgency."

Our universities have done enough dirty tricks" for our government, our nilitary, and our secret "intelligence" igencies. It is therefore particularly lisspiriting to observe Chancellor Young get on and off his airplanes. In Decemer Chancellor Young of UCLA made a visit to Iran. Young is an "old friend of the Shah." He even saw to arrangements he Shah." or the 'Shah's honorary doctorate awarded to him in 1964 when Young was Vice hancellor. The purpose of the visit vas money. Young is hoping for a "sub stantial" gift, probably something like several million dollars. The Shah has tlready bestowed nine hundred thousand n Stanford and a million on George Washington University. So far UCLA, which has a large and supposedly distinguished Near Eastern Studies Department, has mentioned a few generally in nocuous projects to undertake for the shah, contracts for the teaching of English and for various sorts of health care And a typical boondoggle, a \$75,000
"Study" directed at the "possibility" of training Iranian University administraors, and entitled with Byzantine care "Needs Assessment, Formative and Admissions Program Evaluation." Unforunately this sparkling project had to be abandoned because Iranian administra-tors didn't seem to qualify for even the most basic level of California finesse. 'Our requirements were just too stiff, university bureaucrats in Iran lacked even the most elementary "skills" as these are perceived by the Associate Di rector of a curious institution at UCLA called the "Center for the Study of Evalu But it is not all this innocuous, point-

less, or banal. The United States Gov ernment has recently agreed to sell eight nuclear power plants to Iran, and the University of California at Los Angeles is eager to train the "personnel" who will operate them. There is presently \$142,000 affoat merely to "study all the "ways in which the University of California might assist the ministry will

sensitive matter than teaching English, more dangerous, more imbued with po-litical import. And as the alliance between the United States and the Shah's Iran grows tighter and tighter and warmer and warmer, any acceptance of contractual obligation or even of funds, on the part of American universities, is bound to compromise those institutions and the very principles of learning and free inquiry upon which they were found-

And what are the effects of receiving foreign aid and particularly aid from country such as Iran, what are the effects on the American Academy? Without question every academic value is threatened and compromised. "The University will have to act in the interests of the Shah for fear of offending the source of its funding" as Professor Gerald Berreman, Professor of Anthropology and a member of the Academic Senate's Committee for Academic Freedom at the University of California at Berkeley, points out. Grant money is after ali a very important kind of control" he reminds us. There are the effects on the Near Eastern Studies department just to begin with: its faculty, the faculty it may employ, promore or fire. would be most unlikely that it would retain or encourage political opponents of the Shah or his regime. And of course any Iranians, and Iranians Would be most important for any of these projects which range through any of departments, linguistic or technological, engineering or medical--any Iranians would be creened, controlled, manipulated. One would have to be extremely naive o suppose we can receive these grants without repaying the Shah's regime in some way" Hemid Algar, Associate Pro essor of Near Eastern Studies at Berkeley has speculated wryly. And this of course is implicit for content and attiude as well, the intellectual "line" of courses and studies and research. Incllectual integrity is corrupted and compromised, the very foundation of univerity life and work is tainted and corroded peyond measure.

Above all, the acceptance of gifts and grants, or the entering into contracts and provision of services for a dictator such as the Shah, and a regime as corrupt and brutal and debased as his, dishonors the American University while it; research and high level manpower train-logs something still more dangerous--

the Shah and his methods, it gives the appearance, and would in fact, sanction his regime of terror, welcome it into the fellowship of scholarly and humanistic endeavor. Finally, it welcomes it into a sort of control over our own institutions, our faculties, our departmental policies and professional perceptions, a welcome more vicious by far than the charade of his honorary doctorate.

That every freedom is in danger is true to an even larger extent with regard to students, Iranian students, (young men and women who in opposing the Shah abroad and exposing the truth of his fascist regime risk death and banishment and lifelong exile to be the one hope of freedom for the Iranian people. American universities in collusion with the Shah will automatically and with terrible effect weaken the position of all Iranians struggling against the Shah. And that struggle is centered in the universities of the world and among the students of Iran wherever they may be.

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In taking the Shah's money for frivolous "studies" and dangerous nuclear projects, we are in fact selling him his own people, the brave young who oppose him, selling them back to his cells and his torture chambers, those "inquiry rooms" we have already outfitted and provided with trained "operatives". But the American academic mind no longer seems to care; it no longer "thinks," it no longer subscribes to "values" at all; it has contracted some vague amnesiac state that has forgotten academic traditions, it has forgotten the entire academic feeling itself: the libertarian turn of mind, the humane assumptions, the practice of intelligence upon reality. It has given up scholarship for "studies," those expensive empty reports, each one of which seems to merely represent a stipend, a salary, a way for someone to spend a year adding figures to paragraphs of wonderbread prose.

To a dizzying degree we have lost our hold on the idea of a university, on what it is and means and does. It has become a business. And the "administrators" who hustle the Shah talk like the most uninhibited opportunists. Indeed, they talk like con men. "After all, fund raisers go where the money is" says the one at Santa Cruz. "It's just a response to market conditions" says Bob Sim-

Progez - Kate Millet Article

mons, head of Stanford's Pro e its Office. "There's definitely a high potential here" says Bruce Lusigman co-director of Stanford's new satel i e program with Iran. So they are cuito get money. To get money for the university is assumed to be a good in itself. No matter what the money is for. How stupid. The cause of learning is in on way advanced if the Shah's subjects learn English or run nuclear plants or become the jargon chewing bureaucrats that are held up to them as models by functionaries in things called "Centers for Evaluations." This is not learning at all, this is merely the university's slavish and prostituted service to the state. And the "business community," that corporate state fuzzy that began by wasting the university's time and money on its own projects—and ended by taking over, turning the university over to the business men, the "administrators" who have usurped the true role of scholar and faculty.

and faculty.

We have very little of a university left here in the United States. the faculty is nearly completely impotent as a force; reduced to "employees," they are given only the most trivial decisions to make. They are running scared and they never were very brave. And American students have chosen to become docile and apathetic and busy themselves with the pablum of nostalgia prepared for them by the image makers, a nosegay of fraternities and "fifties" songs and religious fakery and diet fads and "organic" vegetation.

So the last thing we really need is to sell the campus to a foreign re-entate. Yet the frivolity is breathtaking. The Berkeley college paper reports that fresh from his trip to Iran, Chuncellor Young of UCLA described the Shah as

engaging person with a strong personality who has done a great deal in the last fifteeen years in terms of social development in Iran." Meanwhile the London Sunday Times reports that fresh from a trip to Iran where they had the rare luck to attend one of the generally secret and closed trials of a political prisoner, two French lawyers heard the defendant whisper to them in English "Mister, Mister" and then pull up the sweater he was wearing to reveal "the whole of the middle of his chest and stomach was a mass of twisted scars from very deep burns." The lawyers Henri Libertalis and Nuri Albala, reported to Phillip Jacobson of the Sunday Times that the prisoner was displaying the marks of his torture: "They looked appalling... His back was even worse. There was a perfect oblong etched into it, formed by a continuous line of scar tissue. Inside the oblong, the skin was again covered in shiny scars from burn-ing." It seems that the secret police, who are under the direct and personal control of that "engaging person" the Shah, have invented an iron frame covered with wire mesh called the "hot table" which is heated to "toast" its victims. Further evidence of what this "strong personality" has done to "bring about social development in Iran" is an eyewitness account of the torture of Asgar Badizadegan: "He was slowly burned by means of an electric fire while his hands and legs were tied to a bed. He was so badly burned in the lower lumbar area that it reached some of the vertibral bones and he fell into a coma. He was then untied and left with his wounds in a putrid state, so much so that the stink of his infected flesh filled our cell and nobody else would come near it. He was then transferred to prison hospital 1975.

and underwent several operation he can no longer walk, only craw fours. "1 Do we really want to do ness with regimes like that? Do really want their dirty money evasinine studies in "Needs Asses Formative and Admissions Prog Evaluations?" Does anyone need any cost-and how huge the cost to what little shreds of integrity or and intellectual excellence we left, to whatever moral sanity or spect for the freedom of ideas or ue of human life?

Here is how Badizadegan died:
was placed on an electric oven an
burned in his sacral areas. His
were not treated for a long time
smell soon became unbearable to
He was half-paralysed and he wai
to court and shot soon afterwards
state. "I For the sake of all the i
human victimes of that place, pai
ent and to come, all those who tr
and wait for release in the hell of
land--and for the sake of all that
uable in our universities, let us r
touch one dime of that money, no
moment consider doing it favors,
ing over its contracts, training it
totem, running its errands, breaf
its fetid air.

Kate Millet feminist author and active Committee for Artistic an tellectual Freedom in Ira (CAIFI)

All quotations regarding torture are from the long and very well demented account by Phillip Jacobsc the London Sunday Times of Janua 1975.

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file - Iran Study

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BRACKLEY SHAW

June 16, 1975

Mr. Gregory Smith 18 Orne Street Marblehead, Massachusetts 01945

Dear Greg:

I have a copy of Bonnie Buratti's June 3, 1975 memorandum concerning CJAC consideration of issues regarding the existence of academic programs involving MIT with foreign governments. I also have a copy of your response dated June 6, 1975.

I am encouraged by the effort which Bonnie has invested in defining some of the issues which she discusses in her memorandum and I agree with her that the foreign programs question is a proper one for our committee to address. I am also happy to learn that Professor Kindleberger's Ad Hoc Advisory Committee on International Institutional Commitments has agreed to meet with CJAC. Unnecessary duplication of study should, of course, be avoided; perhaps CJAC could profit most by having a meeting during the summer for preliminary information gathering and discussions only. In this way CJAC would be prepared to participate with Professor Kindleberger's committee in an informed and meaningful fashion this fall.

As for the question of scheduling a summer meeting for CJAC, I note that your memorandum concludes that such a meeting "... has generally been viewed as non viable (sic)." I am aware of no such general opinion and note that the discussions at our April 28, 1975 CJAC meeting led to the conclusion that a summer meeting could be appropriate. The advisability of a summer meeting on any topic should depend on the interest of the CJAC members in the topic and their availability to attend such a meeting or arrange for appropriate alternates. I believe this position is consistent with your often-expressed view that

3

the CJAC agenda should reflect the interests and concerns of the Committee's members. Also, the use of ad hoc alternate members when regular members are unavailable has been standard CJAC practice (e.g., alternate representation of the President of the Alumni Association).

2

I understand that Bonnie is currently contacting other CJAC members to determine their interest and availability for a CJAC meeting this summer to discuss the foreign programs issues. If there is interest in this topic, I think we should

Sincerely,

Laurence Storch

cc: CJAC Members

L. Allen

J.A. Champy

G.C. Chisholm

V.A. Fulmer P.E. Gray

H.W. Johnson C.P. Kindleberger

E. Michaelson

H.L. Richardson W.A. Rosenblith J.B. Wiesner



file - Irun Stuty

June 3, 1975

TO:

Members of the Corporation Joint Advisory Committee on Institute-Wide Affairs and the Ad Hoc Advisory Committee to Consider M.I.T.'s International Commitments

FROM:

Bonnie Buratti

An important issue affecting the M.I.T. Community has surfaced during the last few months, namely the existence of academic programs between M.I.T. and foreign governments, in particular the current Iranian program to train 54 nuclear engineers.

The issue was discussed as an agenda item at the 28 April meeting and the concensus of the members of CJAC was that the committee should meet to discuss the problem. Some reservations were expressed over the duplication of work our committee may produce since an ad hoc faculty committee is being appointed to deal with the problem. However, it was agreed that the issue is such an important one and so clearly within the realm of CJAC's endeavors that we should attempt to tackle it. In addition, the faculty committee has only two students and no administrators and is responsible to the faculty, but we are a more representative committee and responsible in a broad sense to the whole M.I.T. Community and immediately to the M.I.T. Corporation. Since another important issue is currently being discussed (Campus Housing), we cannot deal with the issue at our next meeting. The importance of meeting as soon as possible was agreed because several governments including those of Spain, Kwait, South Korea, Taiwan, Brazil and India have approached M.I.T. and deals could possibly be in the making this summer and early next fall. The graduate representatives UAP Lee Allen and Ed Michaelson will not be here, but they will secure alternates. If members have any feelings about when we should meet, they should contact Bob Blake in the CJAC office.

I will try to summarize some of the important questions so we can think them over before the meeting. I will also suggest some people whom we might invite to our meetings. The Campus media, faculty meetings, and various community meetings and teach-ins have discussed the issue at length. I have enclosed two newspaper articles, one a letter to The Tech written by the Catholic, Jewish, and Protestant M.I.T. chaplaincy which poses the types of questions with which we should be dealing, and an article from Thursday written by Kate Millet which deals with academic freedom and the scholastic community.

Ostensibly the Iranian program will help an underdeveloped nation to develop nuclear energy. Technology will improve the life of the people. But it seems suspicious that the Shah has chosen nuclear energy when he is wallowing in oil. There are definite dangers of fissionable plutonium from the reactor being used to make nuclear bombs; this is in fact how India got the bomb via Canada. The mechanical building of the bomb is in fact an easy matter, it is the production of fissionable materials which is so costly. In the U.S., with its stringent security measures concerning nuclear materials, enough plutonium has disappeared to make several bombs. Secretary of State Henry Kissinger has already admitted the U.S. would consider intervening in the Middle East if the oil were shut off. Iran is perhaps the U.S.'s closest ally in the Middle East and could conceivably be used to launch such an attack. Getting the bomb to Iran in an innocuous manner would be a convenient way for the U.S. to have at its disposal nuclear weapons to use as a threat device in the Middle East yet wash its hands of the matter.

Technology of and in itself is not uplifting; it is how it is used which damns or blesses it. It is not clear whether technology from the M.I.T.-Iranian program will benefit poor Iranian peasants or just help to strengthen the power of the Shah. If the program were meant to help Iranian people, perhaps freeing the thousands of political prisioners, most of whom are denied the basics of justice, should be part of the contract.

The existence of torture and repression against the people of Iran is well documented (see the article by Philip Jacobsen in the London Times, Jan. 19, 1975). If M.I.T. takes money and gifts from Iran or other nations, will we be free to criticize such inhumanity: in fact might we be implicated? Should a scholastic institution which is dedicated to objectively search for truth and knowledge unfettered by political ties get its hands dirty by doing dictators' dirty work? How should M.I.T. judge the nations with which it makes such academic deals? Or should we just ignore such problems and not care what possible uses the technology we give to people is put? Do we just give knowledge to the highest bidder? Why was the Iranian deal conducted in secret without consulting the M.I.T. Community and then presented as a fait accompli? When nations which discriminate against Jews, women, or certain ethnic groups approach M.I.T. how should we deal with them? Iran itself is not what we might call a philosemitic nation. They have declared they are behind Egypt 100% and one Jewish Iranian student has detailed to me the discrimination Jews (and other minority groups face). Here is a quote from the Shah concerning women:

"I wouldn't be sincere if I asserted I'd been influenced by a single one of them (women). Nobody can influence me, nobody at all. And a woman still less. In a man's life, women count only if they're beautiful and graceful and know how to stay feminine...You may be equal in the eyes of the law, but not, I beg your pardon for saying so, in ability...You've never produced a Michelangelo or a Bach. You've never even produced a great cook...Have you lacked the opportunity to give history a great cook? You have produced nothing great, nothing!"

Can nations which have unsavory political policies hold sway over M.I.T. and perhaps our nation because of financial gifts?

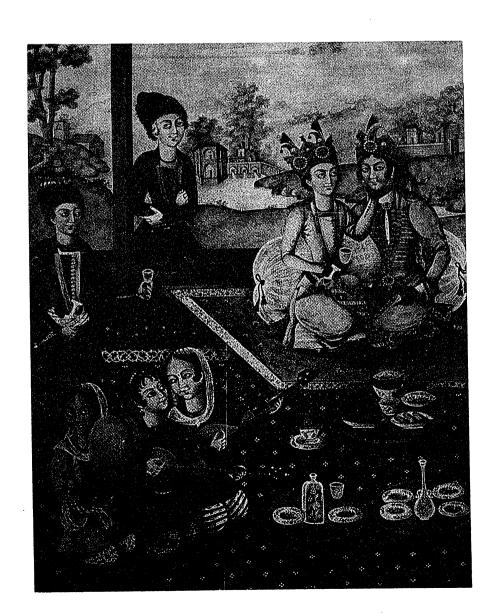
Many of the entering Iranian Students will be agents of SAVAK, the Iranian secret police, and they will watch closely any liberal tendencies their fellow students might have.

Since the program was initiated by the Iranian government and involves special admissions procedures, some questions in the area of admissions arise. Students apply to M.I.T. on their own and are supposed to be judged individually.

I feel it is imperative for us to think about some of these issues and others as they arise. I suggest that some of the people we invite to our meetings be: Chancellor Gray, Professor Hansen, Iranian students, members of CATNES (committee against training nuclear engineers for the Shah) and members of the ad hoc faculty committee.

Bonnie Buratti

PROFILE ON DECEMBER, 1975





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With Best Wishes for happy Melicolays and a Plasperous New year

Ordeshii Jahedi

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COVER: A MINIATURE PAINTING OF AN EARLY IRANIAN SOCIAL FUNCTION SHOWING GUESTS AND MUSICIANS SEATED ON PERSIAN CARPETS.

> ISSUED AND PRINTED BY THE PRESS AND INFORMATION OFFICE

PERSIAN CARPETS

"Where thy carpet lies is thy house." Persian Proverb

For many Westerners, the mention of Iran evokes an immediate image of Persian carpets. Persian carpets have been considered for centuries treasures of the Orient. Heads of state have collected them, world or-

ganizations have embellished their halls with them, and ditheir halls with them, and diplomats have bargained for them while some of the world's greatest artists have recognized the high artistic attainment which the carpets represent. The elaborate design and composition of Persian carpets and their minute details reflect a poetic vision of the world and the value of symbolic representations. symbolic representations.

Ties of

Inspiration

"I will invest my earnings to secure Persian carpets; they provide me color schemes, boldness and harmony and fresh inspiration for my painting."

Antony van Dyck Flemish painter (1599 - 1641)

"Some day I hope to incorporate successfully the color-scheme and effects of a good Persian carpet in my paintings."

John Singer Sargent U.S. painter (1856 - 1925)

"There is more art in a really great Persian carpet than in any picture ever painted." Sir Charles Holmes British painter (1868 - 1936)

Today as previously, Iranians furnish their homes with Persian carpets and they continue to be a top priority item on the tourist shopping list.

The Persian carpet is one of Iran's earliest and most important cultural cornerstones. Persian carpets were the most treasured possessions of Caliph Haroun ar-Rashid of the Arabian Nights. In the tales of the flying carpet, the owners could fly beyond the clouds to a new land of happiness. Traditionally, the carpet was an object of art, admired by rulers in the East and the West. Britain's Duke of Buckingham delayed signing a major treaty with Spain in the early 18th century until the Spanish ambassador had agreed to supply a sufficient number of Persian carpets to adorn his home, the famous Hampton Court Palace. Many of the carpets that were eventually delivered can still be seen in the palace

Traditionally, Persian carpets are woven by women and children in numerous tribal hamlets. The bright colors and themes of the carpets enlivened the rather austere existence of the tribes in the steppe regions while the carpets served as a

barrier to the cold ground and as an obstruction against the

Beyond their practical and aesthetic qualities, Persian carpets are "revealing documents in cultural history: illuminating intercultural relations; contributing to definitions of the quality of successive eras in Iran; documenting religious developments -- indeed, in this last area, providing some unique insights." (From - Dr. Phyllis Ackerman, "Persian Textiles as Culture -- Historical Documents, Woven Treasures of Persian Art, (Los Angeles, 1959), p. 11.)

History of Carpets

Until 1948, there was no positive proof that Persian carpets were woven before the 5th century A.D. in Khorasan, (Northeast Iran). In that year, the famous Soviet archeologist Rudenko discovered a piece of woven material while excavating burial grounds at Pazirik, Southern Siberia, in Central Asia which he had discovered in 1924-5. Between 1947-9, Rudenko excavated these sites and in the fifth tomb, he discovered a Scythian chief buried with his horses and chariot. Everything was extremely well preserved in ice, including a 6' 6' 6' carpet which had been used as a saddle cloth. This was the missing thread in the history of the Persian carpet, linking it to the Achaemenian era (558 - 330 B.C.). The well-known designs of Achaemenian art such as figures of lions, human figures standing beside fire altars in an attitude of prayer, and similar designs which form the patterns of the Pazirik carpets leave little doubt as to their ancient Persian origin. This proves that carpets woven by Iranian craftsmen probably adorned the Palaces of Cyrus and Darius the Great in Persepo-

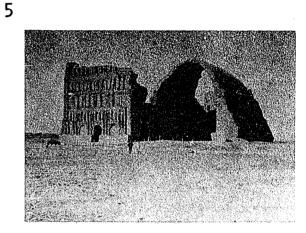


The tomb of Cyrus the Great at Pasargadae

lis over 25 centuries ago! This theory was supported by historians, including Xenophon (450 -355 B.C.) who recorded that Alexander the Great, when kneeling to pay his respects at the tomb of Cyrus the Great at Pasargadae, cast his eyes upon the magnificent carpet which covered the Persian monarch's mausoleum. He felt its silken texture with his fingers and "admired it for its workmanship." The carpets were made from wool, though these richly-decorated works were probably woven cloth and not hand-knotted weaving.

As a consequence of the conquest of Persia by Alexander the Great and the employment of Greek weavers by Shapur I, native rug designs of gardens, flowers, trees, human, animal and bird forms were supplemented by elements of the classic art of Greece, particularly regarding the "art of Paradise.' The Khosrow Carpet

The "winter carpet" or Khosrow carpet, also called the "Spring of Khosrow," named after



King Khosrow's famous palace at Bachdad

the Sassanian King Khosrow I who ruled Iran from 531 - 579 A.D., is reputed to be even more fabulous than the mythical flying carpets of the Arabian Nights. Located in the throne room of his magnificent palace at Ctesiphon on the Tigris River near Baghdad, the carpet was the most beautiful and spectacular ever created. King Khosrow was a renowned warrior yet he was also a knowledgeable, wise ruler and tolerant toward all. He established a school of medicine, repaired roads and bridges and completed the famous dike at Shushtar (Shuster) in Southwest Iran. A system of taxation and restructuring the army also took place under King Khosrow. Under his reign, Persia attained power and influence which it had not enjoyed since the Achaemenian days a thousand years before.

When he died at age 45, King Khowrow was deeply mourned and he was given the title Khosrow the Just. Following his death, the Sassanian Empire began to decline. When Arabs invaded the capital of Ctesiphon, they sacked the

citadel and looted the palace, carrying away the Khosrow carpet.

The magnificent carpet was over 85 square feet in size, some accounts state 100 feet square.) The brilliantly colored, intricate design symbolized a formal garden or paradise with streams, paths, flowers, shrubs and fruit trees. The body of the carpet was woven in silver threads and the yellow gravel of the paths was done in gold thread. The flowers, the fruit and the birds in the trees were outlined in pearls and other precious stones. The outer border, depicting a green meadow was completely covered with emeralds. This masterpiece of Persian art took years to design and fabricate.

According to the Middle Eastern historian and theologian Tabari (838 - 923 A.D.), the Khosrow carpet was cut into 20,000 pieces and distributed among the 60,000 soldiers who stormed Ctesiphon. Tabari estimates the value of the carpet to be at least \$200 million (using current figures), which in modern times far exceeds the sum paid for any single work of art. According to legend, each piece obtained by the soldiers was sold to jewelers in Baghdad and Damascus at an average price equivalent to \$30,000, which would raise the value of the carpet to \$600 million!! Supported by this sum of money each soldier is said to have retired to a life of ease and luxury.

It seems likely that the jewels and precious metals in the carpet were removed to make miscellaneous jewelry. While rumors have occasionally spread that fragments of the carpet still exist, none have ever been substantiated and no actual traces of the carpet have been found.

A hundred years later (750 A.D.) Arab traders appeared in China and

settled in several towns. Almost immediately Chinese ships arrived in the Persian Gulf. The Chinese historian, I Wu Chih wrote: "In the country of Tatsin (southern Persia and Arabia) they weave rugs by means of wool of different colors, taken from all kinds of beasts; they weave into them birds, beasts, human figures and dead objects, grass, trees, clouds and numerous astonishing tricks." Ko Chih Ching stated: "On these rugs they represent cockatoos flying gaily at a distance." These references are of importance because they established a link between the animal rugs of early Persia, copied by the weavers of Alexandria, and the hunting and animal rugs of the Safavid and later periods.

The Fars region (south-central Iran) during the 10th century and Azarbaijan (north-west Iran) during the 13th century were the major centers of carpet production. In the workshops, teamleaders dictated in a sing-song recitation to the workers the color of the wools to be used. It took months, even years, of patient work to finish a carpet. In this period, the design of the early carpets was geometrical. Europeans learned of this art from the explorer Marco Polo and the Crusaders. The Crusades created European interest in acquiring carpets and after the eleventh century, Persian carpets adorned some of the great palaces and castles of Europe.

The Safavid Period

Under the Safavid dynasty (1502 - 1747), carpet making enjoyed a veritable renaissance and the art was widely admired in the Eastern Hemisphere. Famous painters and expert weavers were called upon to develop this industry which centered in Isfahan. Carpet-making was especially encouraged in the reigns



Shah Abbas the Great, 1588 - 1629.

of Shah Tahmasp I (1524 - 75) and his grandson, Shah Abbas the Great (1587 - 1628). According to legend, Shah Tahmasp so admired this art that he learned the craft of weaving and he alone designed several very refined models. Examples of Shah Tahmasp's interest in carpets have survived to this day, including correspondence with Sulayman the Magnificent in which he asks the Sultan for specific room sizes of the Great Sulayman Jami Mosque (Istanbul) in order that a gift of carpets might be sent. The collection of rugs which Shah Tahmasp presented to Selim II on the latter's ascension to the throne of Turkey in the 1566 is recorded by Joseph von Hammer: "Among the gifts of the Ambassador to the great Vizir and other Vizirs were silken carpets of Hamadan, Dergesin and Darabdscherd. The gifts of the Shah to the Sultan were carried on fortyfour camels; among them twenty large silk carpets and numerous small ones, decorated with birds, beasts, flowers and embroidered with gold, nine rugs from camel hair, masterpieces of Persian tapestries, carpets and fine textiles. From his own name the Ambassador presented to the Sultan, carpets from silk and camel hair."

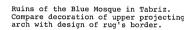
The French traveler Tavernier described his visit to the Royal carpet factory in Isfahan in the 17th century. He reported that it covered a vast area in the center of the city and costly silks, fine wool and gold and silver thread were used by the weavers.

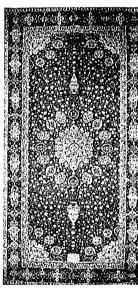
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Some of the most renowned carpets which have been preserved from the early sixteenth century are two hunting carpets, one in the Boston Museum of Fine Arts and the other in the Poldi Pezzoli Museum in Milan. Equally famous, the Anhalt Northwest Persian Medallion and Arabesque Carpet, more than 26 feet long and 13 feet wide, is in the Metropolitan Museum of Art. The Northwest Persian Medallion and Tree Carpet is in possession of the Philadelphia Museum of Art. There are a pair of white-grounded Medallion and Tree Carpets with animals and figures, one in the collection of the Los Angeles County Museum of Art, the other, partially destroyed, is in the Berlin Museum. Truly, one of the most magnificent carpets is Multiple Medallion and Animal Carpet, in the collection of the Victoria and Albert Museum in London. It features a huge medallion with hanging mosque lamps believed to have come from the shrine of Shaykh Safi at Ardabil. It is signed by its maker, Maqsud of Kashan, and is dated 1539. Another exquisite carpet is the Ardabil Tomb Carpet (1540) in the Victoria and Albert Museum.

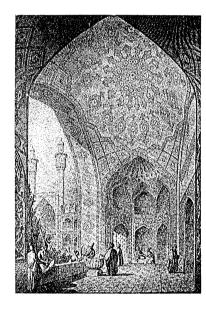
Later in the same century, workshops in Kashan (in central Iran, 160 miles due south of Tehran) produced a series of silk rugs of which many small ones and three huge pieces have survived. Even more luxurious were the "Polonaise" carpets whose patterns were interwoven with silver and gilded silver threads. The principal themes of the carpets were human, animal and bird forms. Isfahan, Kashan

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Ardabil Tomb Carpet, 1540.



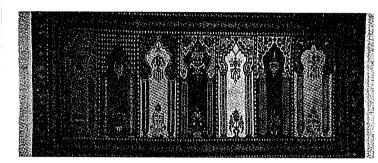
Vestibule of Mader-i Shah College, Isfahan. Compare ceiling with rug medallion.

and Joshaghan (north of Isfahan) were the chief centers of production. About 300 specimens have been preserved in European Court Collections, museums and by individuals. The name "Polonaise" originated in 1878 when several fine examples of the carpets were displayed in the Paris Exposition by Prince Czartoryski of Warsaw. Knowledge of their source had been forgotten over time. The Polish coats-of-arms on the rugs, a famous family of Polish silk weavers and a history of silk rugs in Poland led to the mistaken conclusion that the rugs originated outside of Iran.

Prayer carpets, using the mihrab as the central theme, were also produced in large quantities at this time.

The Palace of Shah Abbas in Isfahan was paved with carpets of silk or gold and the garden pavillions contained silk carpets, and the palaces in Kashan and Kazvin were similarly adorned. When Shah Abbas appointed the first Iranian ambassadors to the courts of Europe in 1599, he sent with them fine rugs of silver and gold thread and made of silk as goodwill gifts.

Textile weavers, working in Isfahan, Yazd and less important centers wove silk twills, satins, velvets and silks using silver and gold in patterns and in the entire background. Ghiyath ed-Din'Ali from Yazd was the best known weaver who signed his work. He and his fellow workers specialized in panels enclosing a



A family prayer rug

singing blooming plant within an arched frame. A very popular theme was repeated floral sprays on a background of solid salmon pink, deep blue, yellow or green. The garden scene, representing people holding a jug and a wine cup, cypress trees, flowering bushes, birds, animals and a pool were also quite popular. Ghiyath ed-Din'Ali was also a designer, poet and wit and he was frequently received at the Court of Shah Abbas the Great.

Carpet and textile weaving reached a point of almost incredible perfection in the Safavid period. Carpets, which were fabulously expensive, were woven in royal workshops (particularly in Tabriz, north-west Iran). The major themes of the carpets were nature, gardens and animals. Frequently, the patterns employed hunting scenes, entire gardens, a central medallion surrounded by floral scrolls, arabesques and animals, flower-strewn fields and foliage designs. Iranian artists took their inspiration from Chinese and Arabic patterns which were only sparingly used,

but added an exotic character to the themes.

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In the seventeenth century, formal patterns of flower-filled vases became a popular theme and subsequently vases containing realistic roses and cypresses were woven on backgrounds of natural settings. European influence was obvious, evidenced by rose bouquets and landscapes containing human figures, animals, birds, trees and flowers which appear more natural than previously.

By the best estimate, some 1,500 Safavid period carpets and carpet fragments have survived to the present. That so many have endured and come down to us over the centuries, despite the vicissitudes of fire, climate, war, insects, wear, and time itself, is almost miraculous. The existence of so many examples is a tribute to the general excellence of sixteenth- and seventeenth-century Persian carpet production.

The 18th and 19th Centuries

By the first half of the 18th century, the traditional court designs had been completely discarded, even though some of the Shahs of the Qajar dynasty maintained their own carpet workshops within the palace compound well into the 19th century. The Herat carpets were produced in patterns unlike their original and the "toranj" design of northwestern Iran could no longer be recognized as decendants of the older ones. Only the silk carpets of Kashan retained their originality. In general the designs became simpler. Because of these changes, these carpets were considered by some to be less valuable than those of the 16th and 17th centuries.

While the carpets of the 18th and 19th centuries differed markedly from those of the Safavid dynasty, they must be appreciated for their artistic qualities and are considered as valuable as their predecessors, although some sources maintain that the carpets of the 18th and 19th centuries are indeed inferior to their predecessors.

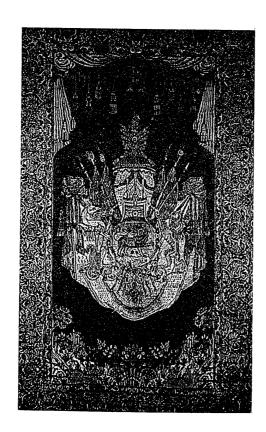
Decline and Reform of Carpet Production

Beginning in 1885, the carpet craft developed rapidly and became Iran's chief industry and export item. As increasing number of workshops were established, particularly in the Tabriz, Mashhad, Kerman and Kashan regions. However, the quality of the carpets was gradually deteriorating and patterns drifted toward imitations and bad taste. Chemical substitutes were developed to replace the fast dyes and colors of vegetable origin. The people to blame most for this decline in high standards were the carpet exporters because they placed orders for cheap and speedily produced commercial handiworks. The situation was rectified after Reza Shah the Great ascended the throne in 1925. He ordered that a carpet-weaving section be established in the School of Fine Arts where a number of the nation's best designers and weavers were assembled to teach the splendors of this traditional art. In addition, in 1936, Reza Shah the Great created the Iranian Carpet Society with a monopoly over production and export. While the society's powers have been gradually reduced, it continues to control a substantial portion of exports.

The Iran Carpet Company, under supervision of the Iranian Carpet Society, operates dye factories in Mashhad and at Arak, (about

150 miles southwest of Tehran) as well as a wool-processing plant in Karaj, some 25 miles northwest of Tehran. The company is also engaged in setting up cooperatives for carpet weavers, particularly in the rural areas, where they are intended to parallel the work of agricultural cooperatives.

Reza Shah personally placed orders for the weaving of a number of splendid carpets which surpassed even the ancient works from every point of view. The carpet which was ordered and manufactured for the coronation of Reza Shah in 1926 is an exceptionally fine specimen of modern Iranian workmanship. As noted in the picture, the carpet



The Pahlavi Carpet, produced for Reza Shah the Great's coronation in 1926.

represents the emblem of the Pahlavi dynasty.

Today, the Iranian Fine Arts Administration, a branch of the Ministry of Culture and Arts of Iran, sends specialists and experts to the various provinces with a view to advise and assist the weavers and artisans in the art of carpet weaving, and to put at their disposal, gratuitously, designs prepared by renowned artists. Moreover, the Fine Arts Administration participates and assists with all available means in the development and improvement of this great ancestral industry of Iran.

After 1965 the government began to apply pressure upon carpet manufacturers to increase the minimum wages of workers (at least by $2\bar{5}$ per cent) and to improve their general working conditions. Wage increases were to be imposed first in the larger factories, mostly in the carpet centers; the Plan Organization allotted Rls. 500 million to cover the additional expenses. By taking over the production directly, the government eliminated the private middlemen in an avowed effort to keep export prices down at their original level, or even to lower them, and thus increase their competitiveness on the market.

A cooperative system was introduced by the government in 1968 in order to meet foreign competition and to improve the quality of domestically made carpets. In 1970 carpets were made available to civil servants on the basis of long-term loans in order to dispose of government surplus stock and to increase revenue.

While carpet weaving in the 20th century developed into a large-scale industry, the art is practiced by women and children in tribal and rural areas. Child

labor laws were enacted by the government, but were not strictly observed and many unregistered carpet factories employed children under 12 years of age. Children are adept at tying the finest knots in carpets and their wages were very low. In 1965, a law was enacted which forbade the employment of children under 12 as weavers. On the initiative of the Shahanshah the government closed a number of carpet-making enterprises beginning in 1968 for violation of these laws. In 1969, the government initiated legislation against the owners of 50 carpetweaving enterprises in Khorasan for employing children under 12. In some areas where carpet-weaving is practiced as a home industry, children still engage in this activity as family workers are not covered by the labor laws.

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In recent years, Her Imperial Majesty has taken the initiative to provide government support of better wage agreements for weavers, enlightened labor laws, as well as upgrading the quality of raw materials. Artisans and traditional merchants were also farsighted enough to adopt new and better production techniques to sustain the industry. Craftsmen developed new designs which modernized patterns, while retaining the traditional values of the art. With stringent quality controls and the increasing prosperity of the domestic market, craftsmen who produce the fine Persian carpets will continue to occupy an important position in Iranian life.

Until 1973, Persian carpets were the most valuable non-oil export commodity, comprising over 20% of the non-oil exports each year from 1965 to 1973.

In 1974, exports of Persian carpets totaled 6.2 million square meters or \$118 million in value, which represents a 17.1% increase over the previous year. About 100 thousand square meters of this total are produced by the Iran Carpet Company and the rest in various units belonging to the private sector.

With rising production, improvement in the quality of Persian carpets and with the implementation of a new marketing

scheme, it is estimated that by the end of the Fifth Development Plan (1978), the export of carpets will increase to \$500 million (37.5 billion Rials) per year. The capacity of the Karaj spinning, dyeing and wool cleansing plant (near Tehran) will be increased with the addition of six units which have been purchased from Poland. With the cooperation of the Industrial Research and Standards Institute of Iran, all raw materials used

		Expor	ts of Ir	an		
		1969	1970	1971	1972	1973
				Million (
1.	Carpets	59.3		75.5		108.0
	-	(27.7)	(23.8)	(27.7)	(26.9)	(20.4)
2.	Cotton	49.5	56.6	67.4	78.9 (23.4)	150.1
		(23.2)	(25.0)	(24.7)	(23.4)	(28.4)
3.	Fresh and dried fruits	30.0	34.6	35.5	57.4	94.6
	dried fruits	(14.0)	(15.3)	(13.0)	(17.0)	(17.9)
4.	Skin and leather	16.9	14.5	17.2	28.2	28.8
		(7.9)	(6.4)	(6.3)	(8.4)	(5.4)
5.	Mineral and	11.9	19.7	16.5	19.2 (5.7)	23.9
	Metal Ores	(5.6)	(8.7)	(6.0)	(5.7)	(4.5)
6.	Caviar	5.8	5.1	5.4	8.3	8.0
		(2.7)	(2.2)	(2.0)	(2.5)	(1.5)
7.	Casings	3.1	4.2	5.6	6.2 (1.8)	8.9
		(1.5)	(1.9)	(2.1)	(1.8)	(1.7)
8.	Gum tragacanth	4.8	3.8	4.7	5.3 (1.6)	9.0
9.	Cumin seed	2.7 (1.3)	3.0 (1.3)	2.6	4.0. (1.2)	4.1 (0.8)
						(0.8)
10.	Others	29.7 (13.9)	31.4	42.5 (15.6)	39.1	93.6 (17.7)

Total 213.7 226.8 272.9 337.2 (100.0) (100.0) (100.0) (100.0)

Note: Figures in brackets are percentages of the totals. Source: Tehran Economist, November 1, 1975 edition.

Composition of Traditional and Agricultural

in the carpet industry will be standardized.

In the spring of 1971 a new museum devoted to Persian carpets opened on a 3,000 square meter site at the northern end of Farah Park in Tehran. This is the first museum or institute in Iran which is devoted entirely to carpets and their place in the development of Iran. The museum was built at a cost of 51 million Rials allocated from Plan Organization funds.

The Work of Rassam Arabzadeh

Since the Safavid dynasty, Persian carpets have remained basically unchanged although attempts have periodically been made to introduce changes. Rassem Arabzadeh, an Iranian carpet designer for 40 years, is the first to replace the traditional carpet design with an innovation of his own. Specifically, Arabzadeh has succeeded in reproducing classical Persian minitures in wool, a feat which no one else has achieved. To weave and reproduce the hairthin lines work, such as the hunting scene in the picture, each knot must be tamped down



A classic miniature reproduced in wool by Arabzadeh.

by the weaver's special comb until it occupies only a fraction of an inch. This results in a very tight pattern of knots which enable the observer to note even fine details in the carpet. The characteristic symmetry and border of Persian carpets are absent in Arabzadeh's works. Another departure is that the background in many of his carpets shows a gradual shading, especially in the sky. This adds a new dimension and depth to Persian carpets, contrasting to the traditional designs of a single solid colored background.

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In addition to miniatures, Arabzadeh has also reproduced many copies of portraits, color photographs, drawings, and cartoons as well as the very intricate, traditional Shiraz art of inlay (Khatamkari) that produces minute works of art out of very small pieces of ivory, camel bone, brass, copper and wood. A comparison between Arabzadeh's copies and the original designs reveals an amazing likeness and portrays his artistic skills. To appreciate fully the intricate work of the artist, one should study his masterpieces with a magnifying glass.

The fine work of Arabzadeh, a native of Tabriz (northwest Iran) is painstaking, requiring up to ten years to produce one carpet. His carpets are estimated to be so valuable that only the major museums can thus far afford them. Arabzadeh's first public exhibition was held at the Goethe Institute in Tehran where the masterpieces were arranged on walls or casually thrown on the lawn. Under the lights, they shone like intricate pieces of jewelry.

Arabzadeh and his twenty colleagues believe that by changing tradition, they have not deviated from the natural development of

Types of Carpets

It is possible to group Persian carpets into three general categories according to the design: geometric, conventional and floral.

1. Geometric

The weavers of this particular type of carpet are usually nomads. The rugs are composed of a series of sharp angular designs and medallions, large or small. The patterns are sharp and the colors are bright, gay and bold, reflecting the weaver's rustic existence. The nomadic Bakhtiari rugs, (southeast Iran), for example, have bright yellow, green and red colors as the predominant shades. All of the rugs in this category are the small scatter -type or runners.

2. Conventional Patterns

These carpets are generally made by villagers and farmers to supplement their incomes during the long winter months when snow and cold keep them indoors. Their carpets reveal rhythmic, interrelated patterns. Each carpet represents an individual motif which may be related to others in the same family or the village. The weavers of this type of carpet design and produce their own carpets.

3. Floral Patterned Rugs

The weavers of the floral rugs are philosophers and poets. They are the skilled designers and creators of Iran's most magnificent works of art which depict the culture and history of the nation. The weavers in this

category generally lived in cities, such as Tabriz, Isfahan, Kerman and Tehran. The pattern, size and color range are carefully planned before the rug is started and the whole rug is drawn in detail and worked out in color as a guide for the weaver. The leading rugs of the floral design are the Kerman, the Kashan, the Qazvin, the Mashhad, the Tabriz, the Isfahan and the Tehran.

Colors and Symbols

Colors are usually obtained from vegetable substances rather than from animal or mineral sources. Examples of these are madden red, indigo blue, saffron henna, green weed, buckthorn, and cochineal which produces carmine. Because the techniques are often kept secret, the same materials can be used to obtain a whole spectrum of shades according to the mixture, degree of concentration and the amount of corrosive used. Even the quality of water used influences the dye. The particular way in which the dye soaks into the fiber gives the carpet an almost irreplaceable sheen and glint. The richness, beauty and durability of these colorings are remarkable and the chemical industry would have great difficulty in duplicating them.

The choice of symbolism and colors in the Persian carpet reflects the preference of the weaver and to some extent his faith in their power. Some important and recurrent symbols of Iranian carpets are: the tree of life of ancient Mesopotamian design, insures eternity of the soul; the pomegranate brings abundance; the camel promotes wealth, the dog protects from sickness and the evil eye; the cock heralds victory in battles; the carnation, a favorite symbol for weavers, brings happiness; the botch

(a sort of palm of cyprus tree with a curved top) represents productivity; columns on both sides of a garden are the doors to Paradise.

Sizes and Styles

There are a great variety of sizes of Persian carpets. The "Kalleh" or "head-carpet' is long and thin. The "Kenareh" (meaning edging or gallery in Persian) is between 2½ - 3 feet wide and 9 - 21 long. The "Mian," the most common size, is 9 x 12 feet. Larger sizes are

generally for export. Even in large rooms, Iranians tend to prefer several smaller rugs to a large one. The "Sajadeh" or prayer carpet is recognized by the marks where the forehead and hands are placed during prayer.

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There are a great number of models of Persian carpets, the most prominent being:

1. The Birjand rugs of east central Iran are woven almost exclusively in the village of Daraksh, about 50 miles north-east of Birjand. The weavers of these

Iran - Major Carpet Producing Centers.

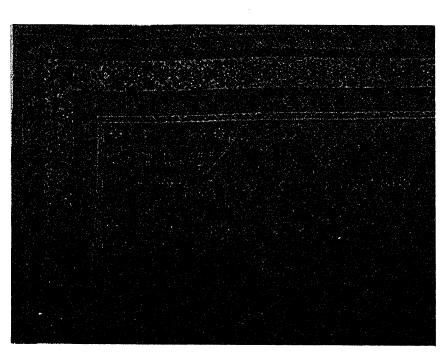


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carpets originally came from Herat. 3. Rugs from this area are characterized by a fine, though sometimes uneven, weaving.

2. Farahan (Khorasan province, northeast Iran). The "farahan" is nearly always characterized by the "Herati" design (sprinkling of flowers with a coiled leaf) which forms the background. The entire center is often filled with rather small, irregular figures on a dark blue field. It was quite popular at the end of the 19th century. Ancient specimens, recognized by the small red, pink, yellow and green designs on a dark background, are now in great demand. The "Herati" design is still found in modern carpets, although the style is usually mixed with others. The color of modern rugs tends to be yellow and in general the rugs are firm, heavy and large.

- 3. Gahyn rugs are most colorful and cheerful. Notably, reds, blues and golds possess an integrity and refreshing transparency. The design is always a minute floral pattern and the surface has a fleece-like texture. While Gahyn rugs were traditionally used to cover divans, today they are generally placed over plain carpeting.
- Gorevan rugs are noted for their bright hues usually on a cream color field. There is a medallion in the center and the border is elaborate.
- 5. Hamadan carpets are woven at least partially with camel hair and its natural brown shade is quickly noticeable. They have medallions in red, yellow, blue and sometimes green in the center aligned with a staff and speckled with pointed flowers. The edgings are decorated with lozenges, stylized animal or hu-



A Farahan carpet.



A seventeenth century Herat carpet

man figures. The bright colors, the geometric design of the central medallions and the pattern of the edgings connote the traditional charm of certain Caucasian carpets.

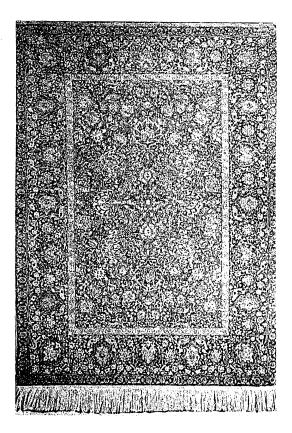
- 6. Herat rugs, noted for their fine quality and durability, are woven in Iran by tribes originally from Afghanistan. The principal designs are the "Herati" and the palm leaf arranged over a field in a systematic way. Some of the modern Herats have medallion centers of red or blue and sometimes green and yellow.
- Herez rugs from the province of Azarbaijan are characterized by a pronounced medallion on a fine blue background. The corners of the carpet are defined by serrated lines in autumn red and frequently are decorated with small designs. The main border strip is light in color (often cream color) with large-sized markings.



8. The designs of the traditional and antique carpets of <u>Isfahan</u> are quite artistic. Rich floral and animal patterns, cypress cones and tree forms are recurrent themes in these carpets. Although the city's apex as a carpet center has passed, Isfahan continues to be an important market for rugs of the Bakhtiari and Lor tribes and the Armenibaff rugs of the Armenian villages.

The same

- 9. Karadagh rugs are made by the Aylants, a nomadic group who live in the mountains north of Tabriz. The rugs are striking in design and have a floral effect.
- 11. As early as the 16th century Kashan was known in Europe for its sumptuous carpets. The contemporary carpets are often made of silk and have medallions as central designs and pampers



on the edgings. The contemporary models may be very finely woven.

12. In the Kerman carpets, there is a predominance of natural flowers, particularly roses and sometimes animal and human figures. The tree of life (its branches bearing various fruits) is sometimes represented as the principal theme with little birds on the border. A vase of flowers or small trees (with or without foliage) might also be the theme of the rug. The quality and light weight of the Kerman rug make it useful as well as highly decorative.

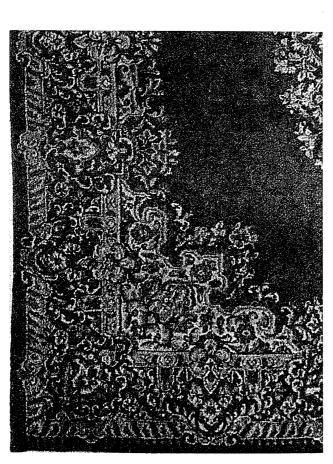
13. The rugs of Kermanshah are made in large sizes with elaborate floral designs, a central medallion and frequently, corner panels. The modern carpets are noted for their lustrous wool which is closely woven and cut short. Today, Kermanshah is a great wool center but not a rug market.

14. The fine wool of <u>Kurdistan</u> is used in that province to produce Kurdish rugs. The groundwork is done in dark blues and reds and the center is a lozenge or large diamond, sometimes irregular in shape, ornamented with small designs of the palm leaf. Goats' or camels' hair may be used in the rug though this is becoming increasingly rare.

15. Mashhad, the capital of Khorassan, weaves carpets of fine colors and often incorporating animals and birds. The palm leaf is a recurring theme and often on a deep blue field.

16. The Nain, a refined version of the early Isfahan, using the finest wools and silks, is the finest woven rug made in the world today. The Nain name is merited by the excellent finish and craftsmanship and the intricate designs. One wonders how in the small village of Nain

(80 miles east of Isfahan) the weavers, with the help of little children, have been able to create these magnificent masterpieces of up to 1100 knots per square inch, some taking up to 10 years to creat!



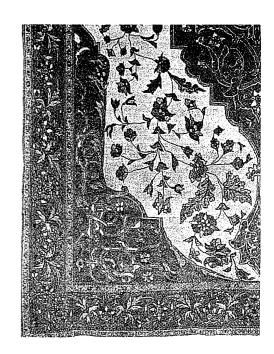
A Kerman carpet.

17. Almost entirely unavailable, the Mir carpet is considered the ancestor of the "Saraband" of which large quantities have been produced since 1890. It is recognized by a background covered with "boteh," strawberry-red palm trees on deep blue background. Lace-fine designs on the ivory-colored edging are characteristic of these carpets. Today there are many imitations and a genuine Saraband is indeed rare.

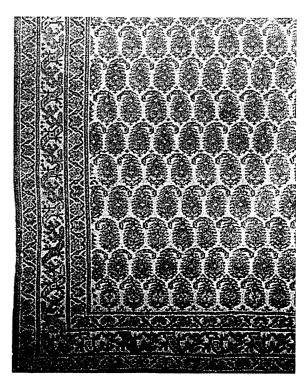
18. The ancient Sarough carpets were reputed to be the finest in Iran. The knotting is so tight that the design is visible on both the front and reverse sides of the carpet. The field may be made of camel hair or in a deep red or blue. The rug itself is heavy.

19. The knots of the Senneh carpets are often so fine (often 400 per square inch) that they are hardly visible to the naked eye. A multitude of tiny details cover the carpet without interfering with its central theme. Typically there is an extraordinarily dense sprinkling of flowers which are perfectly balanced in color and shade. Sometimes, numerous concentric diamonds are woven around minute floral patterns, or vice versa.
20. Serapi rugs have the medallion of cream or ivory and this is surrounded by a floral design. These rugs, which come in large sizes and frequently have inscriptions, are finely woven and more detailed than those of Gorevan.

21. Shiraz, the capital of Fars province, has exported some of the most interesting and exquisite rugs in existence, particularly in the 16th century. The Qashqai is one of the best known tribes of carpet weavers in this province. Their wool is particularly fine and lustrous, though they are rather loosely woven. The chief designs are pole medal-



A rug from Sarough.



A finely-woven Senneh carpet

- 22. Tabriz was the source of some of the fine silk and medal-lion rugs of the 15th and 16th centuries. A medallion in a field of intricate floral designs is characteristic of these carpets and often a Koranic or poetic verse are found along its borders.
- 23. The carpets of <u>Yazd</u> are of excellent quality and are noted for their soft and well-coordinated colors. The Herati design with particularly long leaves, is characteristic of these carpets.

Types of Knots

There are basically two types of knots, single and double, the former called Persian or Senneh and the latter, Turkish or Ghiordes. The labels are misleading and inadequate, giving



A typical carpet of Shiraz.

the impression that Persian rugs are woven in the Persian knot which is both true and false. The Persian or Senneh knot also known as the Far East knot is generally woven west of the Caspian Sea. The Turkish or Ghiordes Knot is the Near East knot and is used by weavers east of the Caspian. Iran is located midway and logically both types of knots are woven. In theory, identification of the knot would seem quite simple although the knotting may be so fine as to necessitate the use of a magnifying glass, pincers and patience. Because most finely woven rugs are produced with the Persian knot, it is often assumed that the Turkish knot is inferior. The truth is that the fineness of weave is largely dependent on the materials. Masterpieces have been produced in both types of knots.

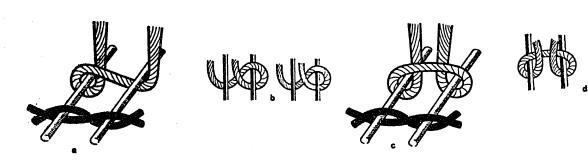
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Beyond this general division there are a number of varieties within each type. Of the approximately 57 varieties, there are 8 Persian knots and about 50 types of Turkish knots.

Commonly the number of knots varies from sixty-four to four hundred in every square inch of rug surface. To compute them, lay a ruler along a line of wea-ving, count the "collars" within the space of an inch, and multiply the number counted by the number of lines of weaving in a vertical inch. Average weaving ranges from sixty-four to one hundred knots to the square inch; fine weaving from one hundred and forty-four to two hundred and twenty-five knots. Rarely is any advantage gained, artistic or otherwise, by increasing the knotting to four hundred and sixty to the square inch, which is the fineness of some modern Kashans.

How to Weave a Carpet

While it is not suggested that one can weave a carpet from the



a) The Sehna (or Persian) knot.
b) Diagram showing how the Sehna knot is made.
c) The Ghiordes (or Turkish) knot.
d) Diagram showing how the Ghiordes knot is made.

following description, it is interesting to note the various processes and to understand the diligent work which must be undertaken to produce a Persian carpet.

In the beginning of spring, sheep are trimmed and their wool is qathered. The wool is then washed, carded and prepared for hand spinning. The carded wool is spun by women with spindles and then wound into bails.

Dyeing is still done by the traditional method. Hanks are boiled in large vats to which the dyes have been added. In order to obtain a uniform color, the hanks are turned in a vat with a large stick. The following colors are produced in the process as stated here:

Black Dye: First the hank is boiled with pomegranate skins for ten hours, and then it is soaked in warm alum water for one or two hours until it becomes black. Sometimes, in order to get a fast color, iron powder is sprinkled on the hank

after boiling, and then it is boiled with alum.

Elm

Red Dye: The hank is soaked in alum and condensed whey. Then it is washed and put in madder root dissolved in warm water.

Yellow and Green Dyes: First of all, white alum is mixed with sparak and boiled in water. Then the hank is soaked in it. After some time the hank becomes a golden yellow. In case the hank is to be green, it is soaked in indigo. The light or dark green color depends on the duration of the time it is soaked in indigo.

Blue or Grey Dyes: Indigo is mixed with hypo-sulphate in water and the hank is dipped into it to get the blue color. The hank becomes grey if more indigo is used.

Brown Dye: The hank is boiled with pomegranate skins and then it is mixed with madder-root and boiled until it becomes brown. Sometimes, walnut skins are used instead of pomegranates. Alum

is used for making the color light or dark.

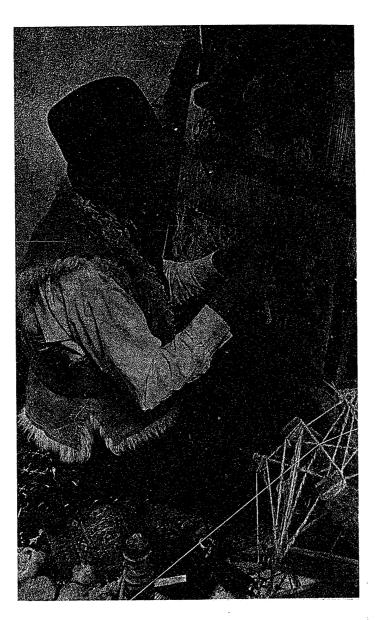
Henna (balsam) Dye: The hank is boiled with pomegranate skin and a little lime is also added to get the henna color.

Violet Dye: The hank is boiled in alum for one night. Then it is washed with water and again boiled with cochineal and citric acid.

The weaving of a carpet is usually done by more than one person sitting side by side. The number of workers depends on the width of the carpet. The weavers sit in front of the loom on seats which can be adjusted to the greater height of the carpet as its fabric is made (on a vertical loom) from the bottom up. Many carpets have old family patterns which are passed from generation to generation and some are so traditional that weavers do the work from memory.

Carpet weaving is done on frames composed of 4 posts two vertical fixed on the ground and two horizontal which run parallel to the floor. There is one more pole 12 - 15 inches thick in the middle of the frame which is moved freely. Its function is to keep the warps separated and at a proper distance. There are two ladders with a few steps fixed on either side of the loom and a wooden plank is placed for workers to sit on. The hind worker fixes the warps on the frame. The thread is composed of 8 - 10 ply cotton yarn twisted together (in some areas, i.e. Fars, woolen yarn is used). The distance between the warps is uniform and equal.

To begin a carpet, one of the warps is separated from the others and raw silk is tied on it and the end of the raw silk is joined with the hank to be used. Raw silk is a woolen



A modern carpet weaver - skill

thread whose hank has been dyed and hung above the head worker. The raw silk is tied on all warps in a row. The lower woof comes on top of the raw silk. Woofs are woven as are the warps with the woolen yarn and are stuck on the raw silk with a special knot. When one row is

woven with knots, a metal comb is used to level and harden it. The head of the raw silk is then cut so that it may become level with the carpet. This act is repeated until the carpet is complete.

The designs of the carpet are drawn on special graph paper by the designer. The design is then cut in many pieces and distributed among a number of workers who fix it before them on the loom as a guide. Each square of the graph paper denotes one knot, painted in a particular color.

The greater the number of knots per square inch, the stronger, smoother, more durable and more valuable the carpet becomes. A skilled worker averages between ten to fourteen thousand knots a day. There are between one hundred-fifty and two hundred thousand knots for one square meter of average quality carpet and up to one million for high quality carpeting.

Once finished, the carpet is sometimes spread out on a busy thoroughfare so that cars and trucks crush its fibers under the tires. Afterward, it is carefully soaped and washed in a river or a spring. (At Rey, this operation has become a regular tourist attraction.) Increasingly, the carpets are professionally cleaned at commercial establishments, though traditional cleaning is still common.

Value and Cost of Persian Carpets

One's appreciation of Persian carpets increases as more is learned about the history, symbols and techniques of this handicraft. Each rug is unique. There will never be two exactly the same, even if the weaver attempts to make an exact copy. Because the carpet is made entirely by hand (taking 6 months to ten years) and all materials are natural

fibers, it is more costly than those which are mass produced with synthetic fibers.

Miles of

A new carpet should always be stiff and difficult to roll or fold though an older one may be limp. The carpet should be folded in half both ways to insure that it is even. If it is not, the carpet was made carelessly and should be rejected is "Kaj" (uneven or crooked in Persian). It must then be spread on the floor to see if it lies flat. If the carpet has creases, it will never lie flat, and will wear unevenly over the crease. In producing a Persian carpet, the weaver may run out of the exact shade of wool used in some part of the pattern or background. In this case, another shade of the same color is used. While this might appear curious to the observer, Iranians do not regard it as defective.

There are many variables in the price of a hand-woven Persian carpet. The finest, softest wool coming from the shoulders of the sheep is more expensive than the coarse wool of the legs and belly. To insure that the colors in the carpet are fast, a wet cloth should be rubbed over the carpet. If the cloth shows the slightest tinge, the colors are not permanent and the carpet should be rejected. When a poor quality of wool is used, it looks dry and lusterless in a carpet while fine wool is as glossy as silk. Cotton is generally used for the carpet's foundation and silk is infrequently found in carpets because of the great expense involved.

Single knotting is more expensive than double knotting. The more knots per square inch, and therefore the closer the pile, the finer and more costly is the rug. Size is another consideration, but only when

Carpet washing and drying shed in Rey, south of Tehran.

comparing rugs of equal craftsmanship and materials. A complicated and small design that
is difficult to work costs more
than a simple design (no matter
how tasteful) and finally, the
overall creative excellence of
the rug as a work of art adds to
or subtracts from its value.

The average rug, in daily use, is considered to have a life of 100 years. For the first 10 years, a rug is considered to be new. From 10 to 68 years it is considered semi-antique and over 68 years it is called antique.

The chief reason for an Oriental rug's durability is the materials used. All genuine Persian carpets are made either with a wool pile on a woof foundation, with occasionally silk, mohair, cashmere, goat's hair. These substances are all highly

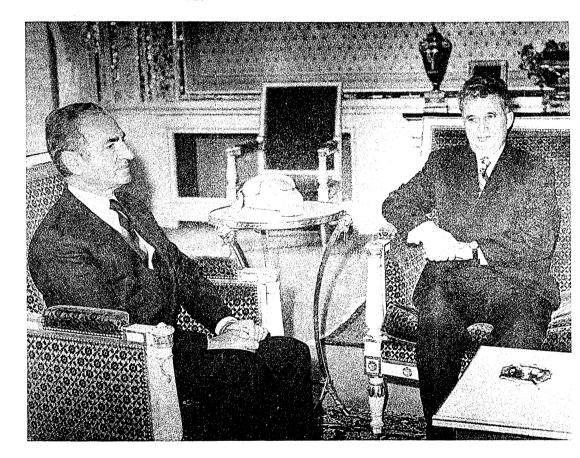
imperishable. In addition, the finest carpets in Iran are sometimes hung in order to preserve the pile and color.

Persian rugs will wear for many decades with proper care. The element that is most destructive to a Persian rug is the grit that is tracked into the home and sifts down into the roots of the wool nap, acting as an abrasive against the pile. A good type revolving brush vacuum cleaner that agitates the abrasives to the surface is the best counteraction to this problem. The more deeply embedded grit, removable only by a good washing, is the most damaging to the rug. Therefore, an expert rug cleaning establishment should was the rug every few years. This also adds to its beauty and wearability and is the best effective treatment against moths.

CURRENT EVENTS:

CEAUSESCU MEETS SHAHANSHAH

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The Shahanshah receives Rumanian President Coausescu at Niavaran Palace on November 28.

On November 27, the President of Rumania and Mrs. Nicolai Ceausescu began a five-day state visit to Iran. A number of prominent Rumanian experts accompanied Mr. Ceausescu to Iran. During the visit the Rumanian President met with His Imperial Majesty and inspected the chemical complex and port facilities at Bandar Shahpur in Khuzestan province (southwest Iran). Upon returning to the capital, Mr. and Mrs. Ceausescu were awarded honorary doctorates in Economics

and Sciences respectively in a special ceremony at the University of Tehran. In presenting the awards, University Chancellor Houshang Nahavandi said that Rumania has been able to contribute to international peace at a time when unrest in the world continues.

In a press conference in Tehran, President Ceausescu said that Rumania fully supported Iran's policy of regional cooperation

On December 1, a protocol was signed by Iranian Minister of Commerce Mahdavi and Rumanian Foreign Trade Minister Patan at Golestan Palace which states that bilateral trade will increase by some 40% to \$154 million next \bar{y} ear and reach an average of \$1 billion annually by 1980. Rumania has agreed to purchase at least \$25 million worth of Iranian industrial goods every year, including buses, machine tools, electric motors and textiles. In return Iran will buy 7,000 pieces of agricultural machinery, and 15,000 tractors.

Rumania will also assist Iran in expanding the Shiraz soda ash plants and electric motor plants to some 30,000 motors annually. The two nations will also cooperate in the expansion of existing cement mills and textile units and the building of new ones.

Establishment of petrochemical complexes and inter-city telecommunications and telephone networks in Iran will be explored.

In agriculture, the protocol calls for Irano-Rumanian cooperation for the development of food industries in both countries. Improvement and extension of oilseed cultivation, the creation of vineyards, breeding fishes, the establishment of silos and cold storages, automatic bread bakeries, canned food and dairy complexes and other food and agricultural activities are provided for by the protocol.

The two sides have also agreed to study possibilities for greater cooperation in the wood industry, including for the development of natural forests and the creation of man-made forests, factories for making pre-fabricated sections for wood houses and also for the creation of a glue manufacturing complex.

Iran and Rumania are also to cooperate in the expansion of the Neka wood complex on the Caspian Sea and also in training experts in this field.

Rumania will assist Iran in the planning and design of the projected Saveh Dam more than 60 miles south of Tehran, and the creation of a power transmission network in Khuzestan.

Possibilities for cooperation in the production of power generators, electricity transformers, the development of irrigation systems, and greater utilization of subterranean water sources through the creation of a number of deep wells.

Officials from the two countries also agreed to cooperate in the modernization and electrification of train and railway facilities in Iran.

Specialists and experts from the two nations will meet soon in subcommittees of the Irano-Rumanian joint ministerial commission for expansion of economic cooperation and to study the execution of agreed projects.

After Mr. Ceausescu's departure from Iran on December 1, a joint communique was issued which supported the strengthening of the United Nations, an independent Cyprus, nuclear disarmament and the U.N. Resolutions regarding a peace settlement in the Middle East. The document also called for the creation of nuclear free zones and regional cooperation of the littoral states of the Persian Gulf.

U.A.E. PRESIDENT IN IRAN



His Imperial Majesty and U.A.E. President Sheikh Zayed.

His Royal Highness, Sheikh Zayed Ben Sultan Ali-Nahyan, President of the United Arab Emirates arrived in Iran on December 6 for an official visit at the invitation of the Shahanshah. During the four day trip, the two leaders held extensive discussions on maintaining security in the Indian Ocean, the Middle East, oil policy, and bilateral relations. His Imperial Majesty met Sheikh Zayed at Mehrabad Airport in snowy weather. They reviewed an honor guard before driving to Shahyad Monument where the mayor of Tehran presented the Sheikh with a gold key to the city. A high-ranking delegation accompanied the Sheikh, which included Oil Minister Mana Saeed al-Oteiba, Minister of Finance Hamadan ben Rashed Aal Maktoum, Foreign Minister Ahmad Khalifa al-Suweidi and Education Minister Abdollah Imran Tarim.

In a joint communique issued at the end of the Sheikh's visit, the two leaders stressed that stability and security in the Persian Gulf and Indian Ocean must be ensured through regional cooperation without foreign interference. Common views on the Middle East, the need for a new international economic order and the desirability of establishing a nuclear free zone in the Middle East were also stated in the document. The Shahanshah and the United Arab Emirates President attributed the growth in economic, social and cultural ties between the two countries to the "spirit of complete understanding" and expressed hope that this cooperation would be greatly expanded in the future.

The said

According to the communique, the Shahanshah had accepted "with pleasure" an invitation to visit the United Arab Emirates at some future date.

Sheikh Zayed left Iran on December 10. He was accompanied to the airport by His Imperial Majesty and top officials in the Iranian Government.

EMPRESS TOURS FARAH PAHLAVI FOUNDATION



Her Imperial Majesty, Empress Farah.

In late November, Empress Farah toured the Farah Pahlavi Foundation's school for training specialists in youth counseling and welfare activities. In her address to student counselors, Her Imperial Majesty said that educational counselors must be trained to cope sensitively and efficiently with the emotional and psychological growth of young people. She added that graduates of the school must be willing and capable of dealing with all aspects of youth development to foster the development of the individual. The Empress stressed that the student counselors must be trained to handle all types of youth coun-

seling and training programs, including orphanages, child-care centers and youth camps. Smaller orphanages and homes were needed to give the child a sense of growing up in a real family, she added. The "children's village" being constructed about 35 miles from Karaj was cited as an example, where 60 family-like units will be set up with a small number of children living in apartments with a foster mother.

The Shahbanou's visit to the Pahlavi Foundation school is a continuing reflection of Her unceasing attention and interest in the youth of Iran.

IRAN SIGNS WORLD'S LARGEST GAS DEAL



Delegates sign the natural gas agreements in Tehran.

On November 30, Iran signed agreements with the U.S.S.R., West Germany, France and Austria to supply natural gas through the Soviet Union to the three European nations. The agreement was the product of two years of study and discussions between the National Iranian Oil Company (N.I.O.C.) and representatives of West Germany, France and Austria.

Actually, the deal involved

three agreements. The first agreement, covering the sale of natural gas to the three Western European countries was signed by the chairman and managing director of N.I.O.C., Dr. Manouchehr Eqbal, the chairman of Ruhr Gas of West Germany, Herbert Schelberger, director general of Gas de France, Pierre Alby, and Austrian Oil Company chairman Ludwig Bauer.

The head of the National

All of

Iranian Gas Company, Mr. Mossadeqi and Iliodor Kulev, deputy chairman of the Soviet Union's State Committee for Foreign Economic Relations signed another agreement on the transit of the gas via the U.S.S.R.

The third agreement, signed by all five countries, covered legal aspects, price rates and delivery procedures.

Beginning in 1981, Iran will sell 13.4 billion cubic meters of natural gas per year to European customers at the Irano-Soviet border near Astara. The Soviet Union will use this gas for domestic purposes in Southern Russia and will deliver the equivalent quantity of gas to the West German border. In return, the U.S.S.R. will construct almost 2,400 miles of pipeline to convey an equivalent amount from the Orenburg and Tyumen gas fields to the Czechoslovak border.

In addition, the Soviets will build a 540 mile pipeline in Czechoslovakia to deliver the natural gas to West Germany at Waidhaus.

Mr. Kulev said that there was no exact estimate of investment required to build the Russian trunkline, but said it would exceed \$7 billion.

West Germany is the original buyer of the natural gas with a 50% share. France and Austria will each share 33.33 per cent and 16.67 per cent respectively. Germany will supervise the sale of Iranian natural gas to other countries and it will collect the cost and hand it over to Iran.

The agreement involves the construction of the world's biggest gas trunkline across the Iranian plateau connecting the Kangan gas fields in Southern Iran with Astara. On the basis of the studies made, the construction of this pipeline will

be completed in five years and it will reach its maximum capacity of 25 billion cubic meters just three years after operations start. The capacity of this pipeline is designed in such a way that, in addition to transmitting the gas to Europe, it will also be able to carry 10 billion cubic meters of natural gas for domestic use in Iran. The pipeline will be 850 miles long and all the pipes needed will be produced locally.

The new pipeline will be constructed on a route similar to the one existing already and which connects Southern Iranian gas fields to Astara on the Irano-Soviet border, through which Iran exports about 10 million cubic meters of gas to the Soviet Union.

The price of the exported gas has been fixed on the basis of the replacing energy and competitive prices of fuels which are consumed in West Germany and will be adjusted in future on the basis of price changes affecting this kind of energy. This means that should the competitive price of energy in the German market increase, the price of Iranian gas will also be modified on the basis of 100 per cent of such increase. Meanwhile, such gas has a minimum price which would not reduce under any circumstances whatsoever. Thus the N.I.O.C. profits will be safeguarded against any probably fall in the competitive prices in the consuming market.

When the pipeline becomes fully operational, Iran is expected to earn almost \$500 million annually based on current prices. About 80% of this will be repaid in goods and the remainder in cash.

The entire project is expected to cost Iran about \$2 billion which will be financed largely in the countries purchasing the gas.

STATEMENT RELEASED BY HIS EXCELLENCY ARDESHIR ZAHEDI
AMBASSADOR OF IRAN

IN RESPONSE TO ARTICLES PRINTED IN

THE NEW YORK TIMES, THE WALL STREET JOURNAL AND NEWSDAY

REGARDING A DECLARATION MADE BY

MR. BIERWIRTH, THE PRESIDENT OF GRUMMAN CORPORATION.

In connection with the declaration made by Mr.

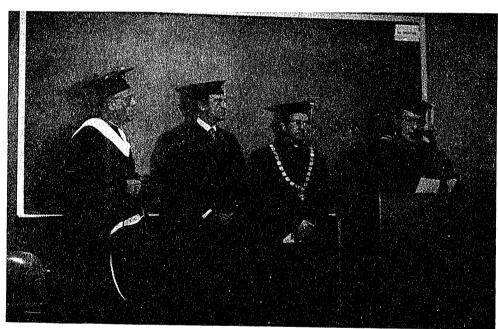
Bierwirth, the President of the Grumman Corporation,
the Iranian Government maintains its position as stated
to the Corporation prior to entering into the F. M. S.

Agreement. That, under F. M. S. requirements and
A. S. P. regulations, contractors should not pay any direct
or indirect fees or commission to the contractor or to sales
agents involved in F. M. S. sales to Iran.

In view of this, the Government of Iran will deduct any amount committed by the Grumman Corporation as agent's fees or commission for the F-I4 deal.

December 16, 1975

(Ambassador Zahedi received an honorary doctorate of law degree from the University of St. Louis on this occasion.)



Father O'Connell, President of the University of St. Louis, introducing Ambassador Ardeshir Zahedi at ceremony conferring honorary Doctorate of Law degree upon the Iranian Ambassador.

It is a great honor and a great pleasure for me to be here today on this very special occasion. A great honor because you were kind enough to select me as an honorary member of your university for which I am deeply grateful. And a great pleasure because I enjoy immensely every opportunity to further discover the land and the people of the United States.

As well as being so gratifying, I consider it my professional duty as Iranian Ambassador to your country to take full advantage of each possibility to promote understanding and cooperation between our two nations, and this is a duty that I welcome and cherish.

As I considered what I wanted to say today, three thoughts came to mind:

One - that your city was named after the French king, St. Louis or Louis IX, whose greatest title of glory, throughout his reign, was his constant and stubborn quest for one goal, justice.

Two - that your country will start celebrating, next month, the bicentennial anniversary of its revolution at a time that finds us Iranians in the midst of a thorough and swift period of change that we call, "The Revolution of the Shah and the People," and these two revolutions bear witness to our common goal, progress.

Three - that I shall be speaking in the very city that saw the explorers, Lewis and Clark, begin their adventurous expedition. However strong was the call of the West, we must remember and admire them for another trait - their courage.

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An if you combine justice, progress and courage, you will have the summary of all efforts of good governments over the whole of history.

It is my wish today, in such fitting and congenial surroundings to state briefly what we in Iran under the leadership of His Imperial Majesty, the Shahanshah Aryamehr, are trying to do to give meaning and content to these words in the lives and hearts of our people, and to investigate what we, Americans and Iranians, can together contribute to the fulfillment of these dreams.

In 1963, at the beginning of our revolution, this is what our sovereign wrote and I quote:

"I looked at Iranian society, recognizing its weaknesses, needs and potentialities. I studied the structures of other societies and saw how they had progressed. The realization came to me that Iran needed a deep and fundamental revolution that could at the same time put an end to all factors that caused injustice, tyranny and exploitation, and all aspects of reaction which impeded progress and kept our society backward."

Since 1963, under our beloved sovereign's guidance and with the help and disciplined efforts of the Iranian people, we have travelled many roads leading to progress and justice.

None has been, or will be more important or decisive than education. For in the process

of developing our country, we do not seek to harness man and his mind to the raw demands of economic achievement and thus transform him into a puppet-like victim forever of forces beyond his reach and his understanding. We, on the contrary, intend to fully use our natural resources to serve our people in their quest, not only for material well-being, but more importantly in their effort to give themselves the broadest opportunity to develop and to enjoy their intellectual and creative powers. To that end, we, of course, do not seek a mass of ignorant subjects. We want, and we need, a nation of educated and responsible citizens. So let me tell you something about Iranian education.

This or

In the past two decades, the number of schools in Iran has increased from 7,000 to 44,000. The number of college students rose from 75,000 to 150,000. In 1953, there were only four universities in Iran. Today, we have more than 100 universities and institutions of higher learning. When the school bell rang this September, over 7 million Iranians of all ages entered some institution of learning which incidentally is well over one fifth of our entire popula-

Last year, the Shah ordered free education for every Iranian attending school. Free lunch and milk were also provided for every child in school.

Nevertheless, at the root of ignorance and the resulting waste of human resources lies illiteracy. In the essentially democratic tradition of our culture, and in keeping with the national character of our people, we have devised an original and highly efficient tool to eradicate this problem: the Literacy Corps.

As of today, more than thirty

thousand young Iranians of military draft age are serving their country in this social, rather than military, capacity, and to offer their knowledge and help to the people of mountain villages and remote areas. As a result, we expect to achieve full literacy within the next twelve years. To facilitate educational programs, two billion dollars have been allocated for educational satellites, T.V. and other visual aids.

In order to eradicate illiteracy in the world our sovereign proposed to UNESCO that every nation set aside the equivalent of one day of their annual defense budget for that purpose. Unfortunately, this was one of the rare occasions that the big powers agreed to disagree with our proposal.

Moreover, His Majesty also proposed the creation of a Universal Welfare Legion. Under this noble plan, the Youth Corps, through the United Nations, would enable individuals of any country, class, race, or religion to devote part of their lives to the service of mankind.

I want to assure you that it is not my intention to review, in detail, all the programs undertaken in our Shah and People's Revolution. In order to enable you to grasp the scope and depth of our efforts, I just wish to mention several significant areas and the results obtained

In the field of health, we have extended free medical care to every man, woman and child in Iran. We have also created a Health Corps, which operates according to the principles described in connection with the Literacy Corps.

In the field of agriculture we have carried out a very extensive land reform. We dis-

tributed to the peasants the land they are ploughing, doing away with the system of absentee landlord that kept the farmers in a state of servitude and poverty, and our food production in a state of waste. In the same spirit, we have invested considerable sums in the research of water usage and in the construction of dams and irrigation networks throughout the country.

In the field of industry, in order to ensure the workers' sense of participation in the operation and prosperity of their companies, we have enacted a law providing them with the first option to buy 49% of the shares of privatelyowned companies and 99% of the shares of most government-owned companies. By 1978, with the assistance of government loans at very low rates, this transfer of property will be achieved. Then, the industries, which will be owned totally or in part by the public, will be in keeping with an economy that has grown for the past decade at the average rate of 11% a year. Our per capita GNP which was only \$100 in 1953 has now reached \$1,350 and is expected to go over \$2,000 by the year 1977.

I cannot fail to speak also about one of the major problems facing the world today: food. Our world briefly had the luxury of believing that it had forever rid itself of the plague of famine. It is now facing a situation that, if left unattended, will bear us the bitter fruits of disaster. There are nearly one billion people in the world today facing hunger, disease and poverty. All converging factors are warning us. In the belief that to govern is to foresee, our sovereign recently sent a message to the Secretary General of the United Nations calling attention to the urgency of the crisis and outlining various

ways of overcoming it. The food crisis calls for extensive international cooperation and effort that the world has not made up its mind to give. In the most recent world food conference in Rome, the Iranian delegation made concrete proposals to avoid a food crisis which would be a catastrophe for mankind.

Be it of the food crisis or the energy crisis, the name of survival today spells cooperation, between rich nations, between poor nations, and above all between poor and rich nations.

Iran was one of the first countries to receive aid under the United States' technical assistance program and the first to terminate aid a few years later with mutual trust, friendship and good will. Now, I am happy to tell you that Iran is one of the most important aid donor nations of the world. Iran's enormous program of international assistance when measured by any yardstick - be it GNP, per capita income, oil revenue, size of population, or any other criterion - exceeds the contributions of any other nation in the history of development.

In our effort to contribute to closing the ever widening gap between rich and poor nations, we have provided less developed nations with direct financial aid or long-term loans to the tune of 11.9 billion dollars, which represents 7% of our gross national product. As a matter of information, U.S. foreign aid remains around half of one per cent of its GNP. On the European side, the Swedish contribution is now reaching one per cent of its GNP.

In addition, most recently, the Shah proposed that OPEC countries

set aside 10 cents of the price of each barrel of exported oil for the purpose of creating a fund of one billion dollars in the first year to provide grant aid to less developed countries. This program continues for 5 years, thus providing \$5 billion - and was fortunately approved by OPEC. However, His Majesty made it clear that had OPEC not approved this proposal, Iran would have carried it out alone.

Jen. Som

In conclusion, let me discuss with you briefly my country's foreign policy.

Iran's independent national policy enables us to deal with any country on a basis of respect for the rights of nations and of individuals. We believe this is the essential foundation of mutual trust and cooperation. We do not believe that what is mine is mine but whatever is yours is negotiable.

In cooperation with all neighboring states, we are using our influence to maintain security and freedom of navigation in the Persian Gulf, which is of vital importance to us and to all oil-consuming nations. We have made it clear on many occasions, the affairs of the Persian Gulf are the concern of all the littoral states. And we have expressed our willingness to assist any country of the region which seeks our support. Iran believes that the Arab-Israeli conflict can be brought to a peaceful resolution by the complete withdrawal of Israeli forces from all Arab territories, based on Resolutions No. 242 and No. 338 of the Security Council of the United Nations. Let me be frank and state that if we are not able to solve the problem of Palestine, there will never be peace in the Middle East. And that is the crux of the issue.

We have made every effort to

It is not a matter of choice, it is a question of survival. It is not only a matter of moral convictions and traditions, it is a matter of realities, we must understand that the fate of mankind is one, that our earth is one.

We must understand that we all

depend on each other. Only then can we achieve that which we hope for: Justice and Progress for all nations. The contribution of your great nation towards these goals was enormous. Had it not been for your assistance, many countries would not have been able to survive the evils of the Second World War. I hope and pray that you, particularly the younger generation, remember with pride what your country has accomplished. And, in spite of recent setbacks, keep up the good work.

Thank you.



37

Jan Brillian

LOUIS UNIVERSITY SAINT

Ardeshir Zahedi, diplomat...statesman...innovator... man of courage...man of action...you have dedicated your life to your country - - serving with distinction both at home and abroad.

You are a man of destiny - - born at the right time and right place to have a profound influence on people and events as your country has surged into a leadership role. You have never shrunk from the responsibilities such a destiny entails.

Born in Tehran in 1928, the son of a high-ranking general in the Iranian army, you were instrumental in the growth and development of the present government under His Imperial Majesty, the Shahanshah.

Your loyalty and courage led to your appointment as special advisor to the Prime Minister. Since 1954, you have held the post of Chamberlain to His Imperial Majesty. This appointment was the beginning of a long and close association marked by mutual confidence and trust which has brought you positions of great importance close to the seat of power.

Many of your accomplishments have been in the field of foreign policy but you have had an important impact on domestic matters as well. Completely in accord with the Shah's dream and determination to create "The Great Society," you have significantly contributed to the end that Iran emerge as a leading economic and cultural center in that part of the

You yourself received your University degree in the United States and served here first as Ambassador in 1957. Springing from these experiences and from your work as Head of the Iranian Students Program in 1959, the education of Iran's youth - - especially in the excellence of their training abroad - - has been of paramount interest to you. As Ambassador you have taken personal responsibility in strengthening cultural and educational ties among nations - - especially between Iran and the United States. You have pushed these efforts without forgetting or allowing the world to forget Iran's own unique culture and ancient civilization.

The sor

Your contribution to the larger diplomacy are equally noteworthy. From 1967 to 1971 you served as Foreign Minister of Iran and laid the groundwork for a highly professional foreign service by consolidating all government functions related to international relations to train young Iranians for the foreign service.

In serving your country as Ambassador to Great Britain from 1962 to 1966 and twice as Ambassador to the United States, you have been in a strong position to influence international affairs. It should be noted that Iranian accomplishment in the field of foreign policy under the astute leadership of your Sovereign provokes the admiration of all who are familiar with your country's role in world affairs.

Your accomplishments have not gone without notice. You have been decorated by 25 countries, in Europe, Asia, Africa and South America, but perhaps the honor closest to your heart is the one bestowed by your own government when you received the coveted Order of Taj. Limited to ten men, the honor is reserved for Iran's top citizens - - your country's best and its brightest.

Ardeshir Zahedi, for your part in the spectacular development of your country, for your contribution to world diplomacy, and in recognition of your own personal valor, Saint Louis University takes pleasure in paying you public recognition and we are pleased to confer upon you the honorary degree of Doctor of Laws.

- - John W. Wagner

Monday, December 8, 1975

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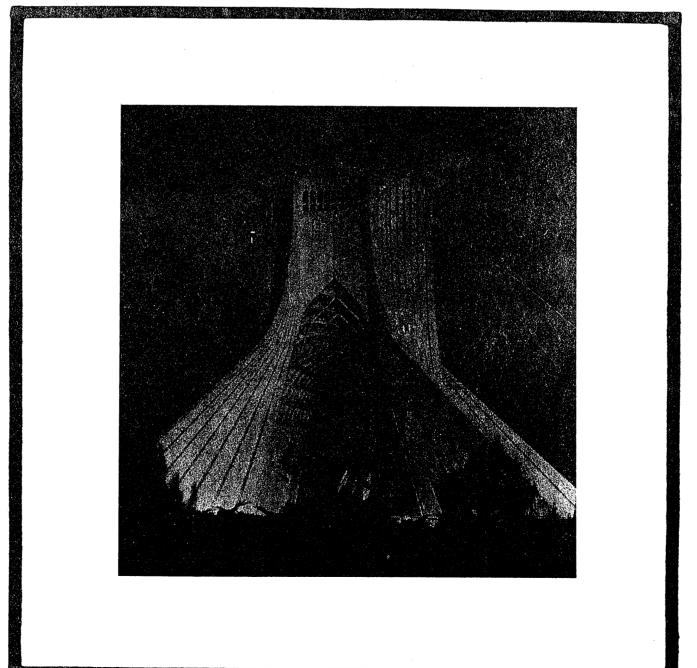


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On the Cover: The Shahyad Monument, near Mehrabad Airport.

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TEHRAN: THE CAPITAL OF IRAN

It should be noted that the impetus of Tehran's development into a modern metropolitan city is directly related to the establishment and rule of the Pahlavi dynasty in twentieth century Iran. As described below, both Reza Shah and His Imperial Majesty have initiated numerous policies to foster Tehran's growth and beauty as part of their tireless efforts to modernize and industrialize Iran and create a more dynamic and vibrant society.

Tehran is a young city, less than 200 years old, overlooking a land enriched with the legacy of thousands of years of history. Tehran has been situated on the Iranian Plateau ever since the north-south route between the Caspian Sea and the Persian Gulf intersected the Great Silk Route from China; but at that time it was the ancient city of Rey that stood at the crossroads and overshadowed Tehran. It was not until 1197 A.D. when Rey was destroyed by the Mongols that Tehran became an important city. The town began to prosper in the late tenth century A.D. when Talimaseb I built a bazaar there and a wall around it. The wall had four gates and 114 towers. After the destruction of Rey and the subsequent emigration of the survivors to Tehran, the town began to turn into a financial and cultural center. In 1795, Agha Mohammad, the founder

of the Qajar dynasty, made Tehran his capital.

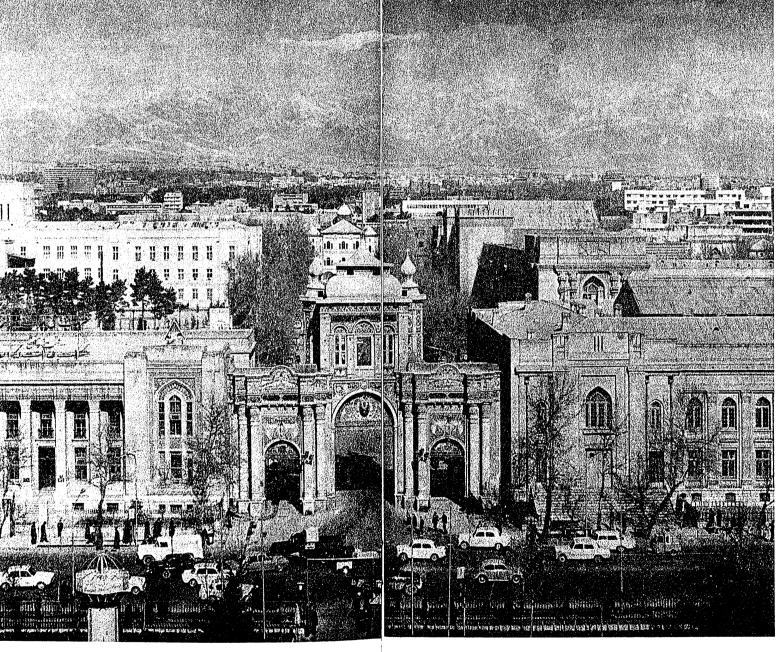
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The capital numbered some 60,000 year in the year 1800, and had grown to 200,000 by the beginning of the twentieth century. Rey, in the southern periphery of what is today Tehran, and Shemiran, at the foot of the Alborz mountains north of the city, were still separate towns. In 1925, with the commencement of the Pahlavi dynasty, all of Iran and Tehran in particular started to grow and modernize rapidly. There is no longer a wall around Tehran. Shemiran and Rey have long been absorbed into its urban area covering a narrow strip between desert and mountains. With the beginning of industrialization and the development of a constitutional monarchy during Reza Shah's reign, the capital

became the focal point of development. The construction of wide avenues and new buildings was a testimony to the extensive modernization program undertaken by Reza Shah the Great. Today a bustling city of 4.2 million people and an area of 620 square kilometers, Tehran contains over 10% of Iran's population and nearly half of the construction industries and almost all of the corporate headquarters of major companies, both national and foreign. Tehran has become the very center of Iran's growth and commercial activity, and is transforming with unbelievable speed into a great contemporary metropolis.

Tehran is a city as difficult to govern as any sprawling metropolitan complex. With a growth rate of 6% annually, Tehran's population growth poses a very serious problem to the city planners. Government studies show that the city can only accommodate 5.5 million people by 1993 with available water supplies. The national government has therefore taken measures such as the development of other industrial poles throughout Iran and the decentralization of government administration to thwart Tehran's growth rate. However, the continued interest in large scale public and private developments around Tehran means that the city, at least for now, will continue to expand. The heavy concentration of the nation's construction industries and workers in the capital also indicates that the economy of the region is based on continued physical growth.

With this in mind, Tehran adopted a master plan in 1968 to plan and control the city's growth. By 1993, it is predicted that Tehran will be a city stretching as far as Karadj, 45 kilometers west and containing 5.5 million people.



One of the old gateways to Tehran. Foreign Ministry Building in the background on the left.

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Municipal Projects

There are municipal projects either on the drawing boards or in the process of implementation, but the Shahestan (Place of the Shah) Pahlavi is the most remarkable because it is the largest development project ever carried out within a city anywhere in the world. The Shahestan will become the commercial, administrative, and cultural center of Iran, while slowing the outward growth of the city of Tehran.

As a satellite town, it will be a unique creation as it will be located in the heart of a large metropolis. Bounded on the north by Pahlavi Boulevard (Mirdamad Avenue), on the east by the neighborhood of Old Shemiran Road, on the south by Abbas Abad Avenue, and on the west by Jordan Avenue, the barren hills totalling 5.5 million square meters in area will be transformed into an ultra-modern town in the heart of Tehran.

This land was originally distributed among officers of the armed forces for housing some 22 years ago, but the area remained undeveloped marring the beauty of the capital.

In June, 1971, the Shahanshah ordered the Tehran Municipality to take over the vacant land. Work was immediately launched on preparing a master plan for the purchase of the lots. The plan envisaged for the town, prepared with the assistance of well-known Iranian and foreign firms experienced in urban development, will be executed in several stages.

With the completion of the first phase in three years, the municipality hopes to make part

A view of Tehran 25 years ago.



A street scene of Tehran (in front of Bank Melli) 25 years ago.

of the town operational. By the end of the final stage (ten years from now) a total of over \$3.5 billion will have been invested on land development and the establishment of buildings and facilities. The now arrid wastelands will be transformed into a shining, colorful jewel in the midst of Iran's bustling capital.

With a planned residential population of only 55,000 people living in the modern apartment buildings to be built on 950,000 square meters of land set aside for housing, the Shahestan will host daily as many as 200,000 civil servants and employees and up to 80,000 other visitors.

These 250,000 people will stream into government offices and private organizations including the National Iranian Oil Company, Atomic Energy Commission, nearly all major Iranian banks as well as the municipality itself. These organizations have already applied for land within the 500,000 square meters earmarked for government buildings and 350,000 square meters for private offices.

Nearly all the embassies will also be moved into a vast diplomatic enclave located on the southwest side of the complex.

The daily visitors will be absorbed by a large number of



The National Iran Oil Company

hotels that will be constructed within the Shahestan which is to become the largest hotel center in Iran. Several hotel corporations have already applied for work permits and land in the complex.

A massive cultural center consisting of the Center for the Performing Arts, Center of Iranian Arts, Museum of Science and Technology, The National Museum, a planetarium and the headquarters of the Pahlavi National Library are also among the many facilities planned for the Shahestan Pahlavi. The massive complex, named the National Cultural Center, will in addition contain a number of other museums, a theater and an opera house, and other arts and cultural amenities.

One of the many unique aspects of the town is that almost a third of the total land area of 5,300,000 square meters has been set aside for greenery, parks, playgrounds and open space. Four vast parks will break the monotony of buildings and skyscrapers that will characterize Shahestan's skyline. Numerous sports and recreational, as well as shopping, educational, medical and other facilities will also dot the town's landscape to offer residents as well as visitors the necessary facilities.

The massive Shah and Nation square, located in the center of the complex, will be the largest in Iran, even exceeding the giant Shahyad monument in size and beauty.

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Several companies have already started land development. The next phase is the establishment of the Square, the Shanshahi Boulevard, the Kudak Park, the Shahbanou Boulevard and other planned roads and parks.

This project will have a major effect on the housing market in Tehran. When government and private organizations evacuate their present buildings and move into Shahestan Pahlavi, municipal experts expect an upsurge in the availability of housing units and a sharp decline in the cost of housing in central Tehran.

Transporation

There are at the present some 700,000 vehicles operating in Tehran. Although in the past several years, a growing number of modern freeways have been built in Tehran, the road system is still inadequate to handle the increasing flow of traffic. Several studies have been made and the outcome has been a proposal for a subway system to be integrated with a new municipal street system. The planned metro will run from south Tehran via Saadi and Roosevelt Avenues through 25th Shahrivar Square to a station to be built at the northern tip of the Shahestan Pahlavi (near Mirdamad Avenue). The metro, construction of which will go ahead at the rate of 10 kilometers a year, is expected to be decisive in easing the flow of city traffic. A new intercity bus terminal will be constructed in southern Tehran to accommodate all long distance passenger buses from town.

A total of 1.5 million square meters of land has been set aside to create a network of freeways and boulevards not only to serve the Shahestan but also to reduce the flow of traffic in central Tehran. The



The Elizabeth II Boulevard.



Panoramic view of the Capital

76 meters wide Shahanshahi Boulevard will run directly northsouth, dividing the capital in half. The recently opened Shahanshahi Expressway (the fourth main artery linking northern Tehran to the center) and several other avenues running south-west will also help ease the flow of traffic.

In addition, there will be six wide avenues (a 76 meter road connecting the Tehran-Karadj Parkway to Tehran-Ab Ali Road, the 45 meter Dariush Parkway, Mehre-e-Shah and Abbas Abad Avenues, the Jahan-e-Kudak Parkway and Mirdammad Road) as well as a maze of smaller streets and avenues which will parallel from west to east.

Existing roads and avenues around the town will also be developed. In addition, a prefabricated overpass, a tunnel and making some streets one-way will contribute to reducing traffic congestion in Tehran.

These schemes which will be operational within a few months, are expected to eliminate congestion in the city and ease the movement of traffic into Shahestan Pahlavi.

The new Tehran International Airport, which is to be built some 30 kilometers south of Tehran will ease the pressure on Mehrabad Airport both in terms of passengers and traffic flow.

Housing

The government is encouraging a policy of building apartments in Tehran and will no longer make loans for single-family houses, except for low income groups. This policy has been spurred by various private companies, and is expected to make high-rise living a commonplace feature in the capital.

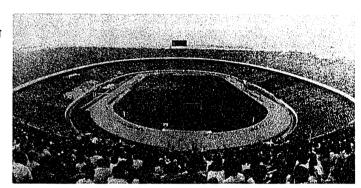
Aryamehr Sport Complex

One of the major projects in Tehran has been the Aryamehr sports complex taking shape west of the city, just off the Kardj freeway. The complex hosted the 1974 Asian Games, and might be selected for the 1986 Summer Olympics.

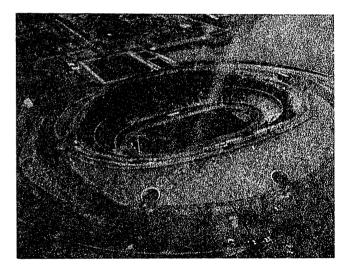
The first increment of the Aryamehr complex was the 100,000 seat stadium completed in 1971. This stadium is the world's largest earthen stadium. It has been the site of major tournaments and national parades. As the famous Iranian architect Nader Ardalan pointed out, "to build the stadium we excavated close to 3 million cubic meters of earth."

In addition, the Aryamehr Sports Center will include a sports hall for 12,500 spectators, a swimming hall with 4 olympic size pools, a velodrome, four smaller sports halls, a three story Press Center with accommodations for close to 400 journalists. There will be a host of restaurants and kiosks around the man-made lake resulting from excavations for the stadium.

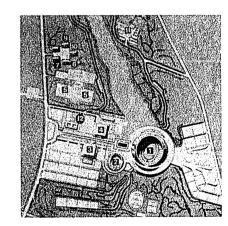
Four miles north of the complex, the Asian Games Village is situated with 39 apartment blocks around a bazaar-type village center. These apartments will become dormitories for the planned Sports College



An overview of Aryamehr Stadium



The Aryamehr Stadium.



The Plan of the Aryamehr Sports Center.

which will soon take over the area. This complex marks another step in reducing congestion in the capital due to the concentration of existing sports facilities in central Tehran.

Monuments

There are two monuments in Tehran. The Aramgah -- the tomb of Reza Shah Pahlavi, and the newest, the Shahyad Monument built to commemorate the 2,500th anniversary of the founding of the Iranian Empire. Shahyad marks the entrance to Tehran from the airport and has given Tehran one of the most attractive and most imposing portals of any major city in the world.

Shahyad has managed to capture the grace and feel of Persian culture in a totally contemporary form. It is indeed a pleasure to drive west along the boulevard toward Shahyad in the evening and watch the sun set under the arch.

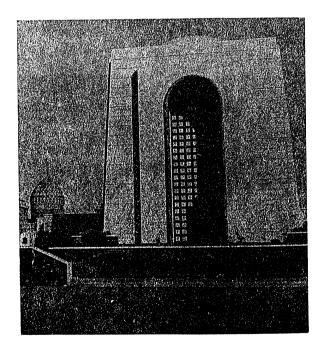
Buildings

As Tehran continues to grow, new shopping centers, modern housing projects, big hotels, new hospitals, schools, colleges, and government buildings mushroom out of the ground rapidly. One can find a mixture of designs each lending itself to a different trend of thought and movement. However, one can see more attempts all over the city at deriving contemporary designs from old cultural sources. The new city theater is a good example. The emphasis on surface and the use of tile are reminiscent of Safavid architecture.

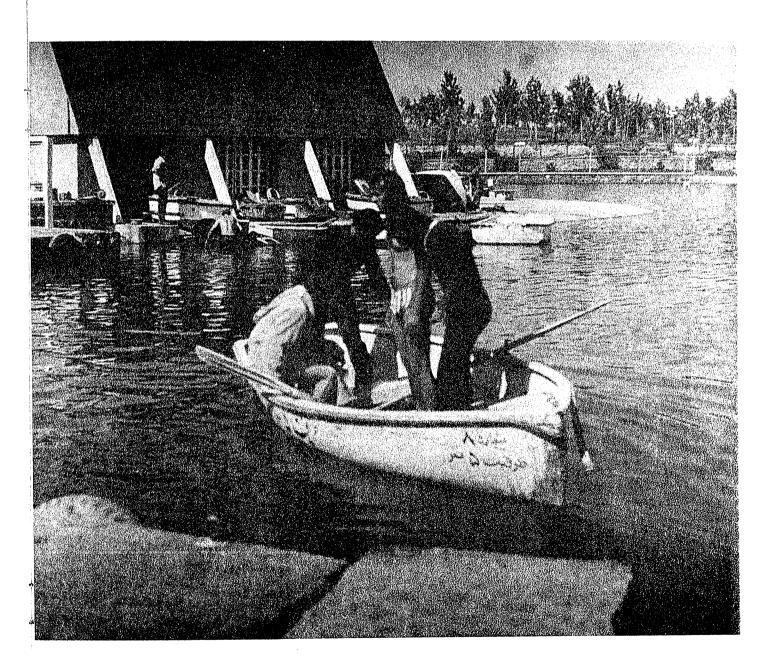
Parks

There are at the present 56 parks scattered throughout Tehran, with many more being plan-

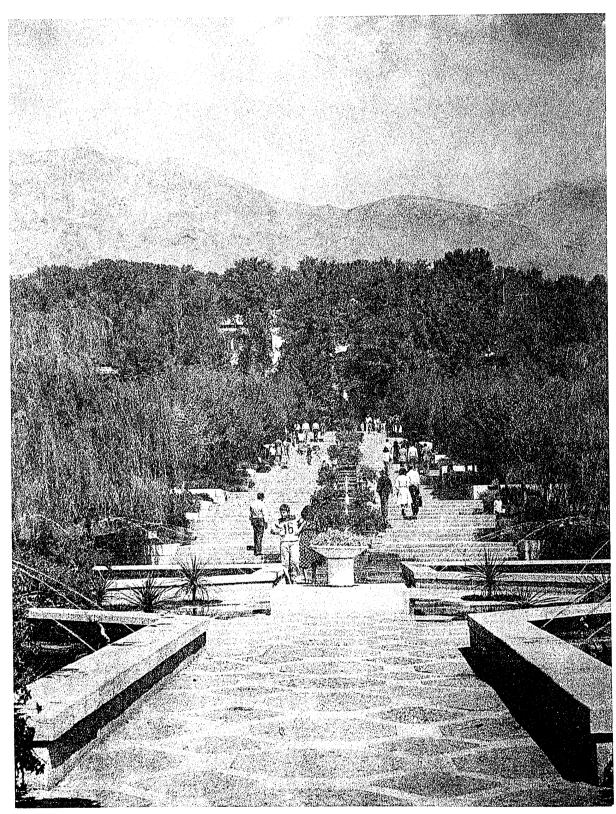
ned or under construction to provide various recreational activities. Among the major parks are the Farah Park on Elizabeth Boulevard, Saii Park on upper Pahlavi Avenue, City Park between Hafez and Khayyam Avenues, Niavaran Park at the end of Saltanababad Road, and Park Shahanshahi near the zoo on upper Pahlavi Avenue. The Manzarieh Camp, near Niavaran Park, is a pleasant picnic spot. Starting from Darband, the Alborz Valley provides envigorating hikes and picnic spots.



The tomb of Reza Shah the Great in Rez, just south of Tehran.



Farahabad Park



Niavaran Park.



Takhte Jamshid Avenue in central Tehran.

The City -- A Description

From the preceeding description it is clear that Tehran has become a modern and thriving metropolis. The best way to describe the city is to start from the big central avenue, Shah Reza. South of this are the commercial banks, and cultural and administrative areas, gradually

leading to the lower town which contains the workers' districts. To the north, Tehran is turning towards the 21st century. This aspect becomes more and more noticeable as one moves towards the northern suburbs, around Pahlavi Avenue. Here one finds excellent restaurants, clubs (e.g. the Imperial Country Club), and international hotels. North

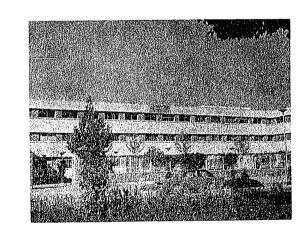
one factory per month.

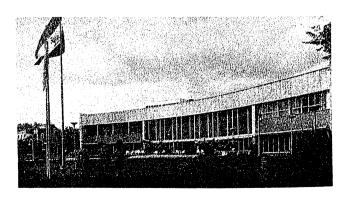
Tehran has all the diversions found in a modern capital city.
Many cinemas, cabaret, night
clubs, shows, fancy restaurants, and a host of recreational facilities. But there is a great deal to see and do aside from those modern attractions. There are a number of museums representing an unbelievably rich storehouse of treasures dating all the way back to prehistoric days. Of prime importance, of course, is the splendidly arranged archaeological museum, the Iran Bastan, which contains objects dating as far back as the fifth millenium B.C. Among its famous displays are gold and silver treasures from various archaeological sites around the country, including Persepolis. These are all displayed on the ground floor, while the floor above is devoted to Islamic art: ceramics, illuminated manuscripts, brocades and carpets, intricately decorated mihrab (niches) and minbar (pulpits) from old mosques and lovely carved alabaster windows. A few hours, or even better, a few days, spent in Iran Bastan is a living proof that Iranians have been superb artists and craftsmen for thousands of years.

The Golestan Palace was built

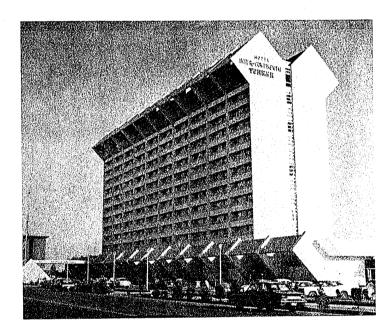


Hotel Darband near Tehran.

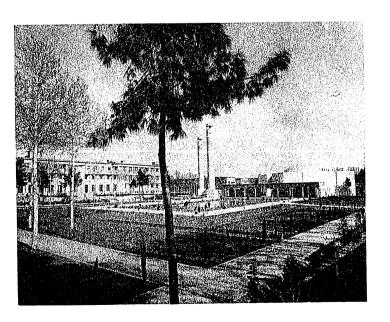




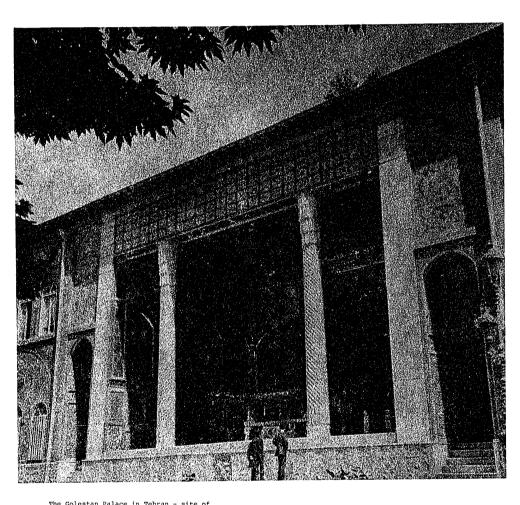
The Youth Palace in Tehran where a wide variety of sporting, cultural and recreational facilities are available.



The Inter-Continental Hotel in downtown Tehran.



A view of Tehran University campus.



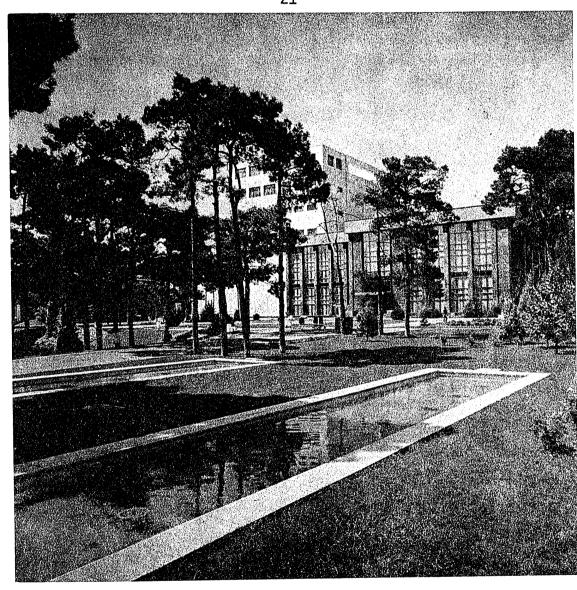
The Golestan Palace in Tehran - site of the Coronation of Their Imperial Majesties in October, 1967.

over a hundred years ago in a most enchanting garden, with bluetiled pools beneath wide spreading shade trees. Here, displayed in a grand hall, are priceless objects of art, including rugs and enameled works, gifts from foreign monarchs and royal regalia including the famous Peacock Throne, set upon a dais at the end of the hall. On state occasions, the Shahanshah gives audience and receives distinguished foreign visitors, and it was here that the coronation ceremonies for both His Imperial Majesty and Empress Farah were held.

The fabulous crown jewels of

Iran may be admired within the vault of the Bank Markzai (Central Bank of Iran) where they are kept. Aside from the two Imperial crowns and lesser coronets, there is a bewildering profusion of mounted and unmounted gems, ropes of pearls, gemencrusted swords, and of other rare, beautiful and valuable objects. The most famous of the diamonds is the Sea of Light, and the most famous of the stones and one that is said to be unique in the world is a flawless emerald three inches long and two inches wide set on top of a snuff box.

There are also smaller museums

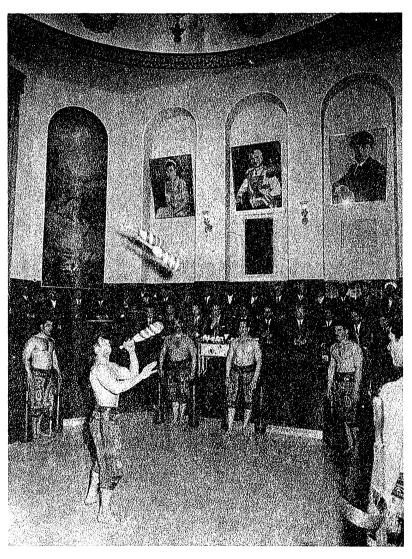


Rudaki Hall completed in 1967 is the main concert hall and opera house in Tehran.

in Tehran. The most noteworthy are the Museum of Decorative Arts and the National Art Museum, devoted to displays of contemporary Iranian arts and crafts, and the Ethnological Museum, which houses a remarkable collection of modern reproductions of ancient Iranian costumes draped on wax figures.

Tehran has two major nineteenth-century mosques: the Masjid-e-Sepahsalar, containing

an important Islamic library including five thousand manuscripts, and the Masjid-i-Shah, the Royal Mosque, built during the reign of Fath Ali Shah, a Qajar monarch. Of considerable interest also is the Marble Palace built by Reza Shah and formerly used as a residence by the Royal Family. It was recently donated to the nation by the monarch to serve as a Pahlavi dynasty museum.



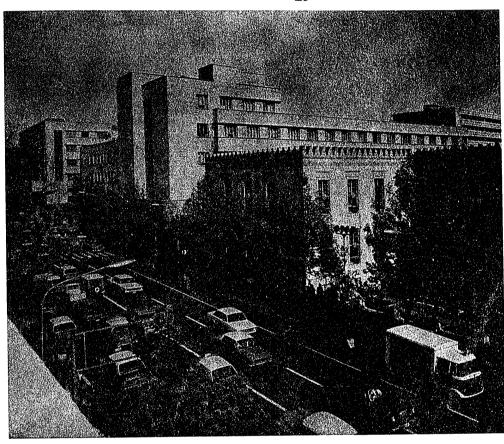
Traditional Iranian sports - Zurkhane

Rudaki Hall offers a regular series of concerts, operas, and ballets, as well as performances of Iranian dances. The recently built amphitheater located in central Tehran with its traditional architectural design is used for folkloric plays and operas.

For sports enthusiasts, one of the most fascinating places in

Tehran is the Zurkhaneh (house of Strength), where ancient Iranian gymnastics, exhibited at royal courts in the past, are still practiced to a traditional musical accompaniment.

Another popular activity in Tehran is shopping. After the recent campaign launched by the Shahanshah against profiteering prices have been fixed and stabilized, largely obviating the



Bank Melli is the largest commercial bank in Iran.

necessity for bargaining. Of all alternatives, including dozens of boutiques, numerous department stores, carpet, jewelry and antique stores, Tehran's covered bazaar may be the most exciting. It is the largest in the country, and in the Middle East. There is a bewildering maze of narrow lanes filled with a constant throng of buyers and would-be buyers locking at the wares in tiny stalls. Here, sellers of similar wares tend to congregate in one area. The result of all this is an ageless clamor that adds to the happy confusion beneath the ancient roofs.

Tours of the city are organized by travel agencies most of which are to be found in the Villa or Shah Reza Avenues area. These trips are generally for a half day period, and are use-

ful to acquire a general impression of the town. In addition, one can go on special tours or use the city's buses or taxis to see in detail the many points of interest.

The same

A typical plan for a 4 - 7 day visit to Tehran would include:

First day: The Shahyad Monument (panorama, museums); Aryamehr stadium; Sepahsalar mosque (19th century); craftsmen's school and museum; Shah mosque; and a stroll in the Bazaar, where one can also have dinner.

Second day: (morning) Crown Jewels (in the Markazi Bank); the palace, gardens and museums of Golestan, and the Ethnological Museum; (afternoon) excursion into the mountains to the

Skiing at Shemshak outside Tehran

ski-resort of Shemshak in the North, or to Abe Ali and Polur in the East, then dinner in the mountains, or in one of the many restaurants with views in the Northern district.

Third day: (morning) Rey (south of Tehran), where the carpet—washing in the Cheshmeh Ali stream must be visited, as well as the Toqrol Tower and the mausoleums; (afternoon) Tehran Archaeological Museum; Central Post Office area, Sepah Square, Lalehzar Street, Istanbul Street, Ferdowsi Street (antique shops, carpets), the gymnasts in the "Zurkhaneh" of Jafari Club (about 17.00 hours); (evening) visit to the Opera or the New Theatre. Dinner in a restaurant on Pahlavi Avenue.

Fourth day: (preferably a Friday) excursion along the valley towards Tochal (chair-lift from Sarband onwards). Open-air lunch in a tea house in the mountains.

For the outdoorsman, the countryside around Tehran offers some interesting scenery: flat sweeping plains to the west, the desert to the south, and the snow-capped Alborz mountains to the north and northeast. Within driving distance are:

Karadj Dam - 61 kilometers from Tehran offers boating and water skiing.

Alborz Game Reserve - a three hour drive from Tehran and near Dizin ski resort, has good fishing and camping facilities.

Ab-e-Ali - 60 kilometers east of Tehran and known for its mineral springs, offers skiing in the winter, and serves as a refuge in summer time.

Shemshak - 60 kilometers from Tehran, is another year-round

resort, with excellent skiing in the winter.

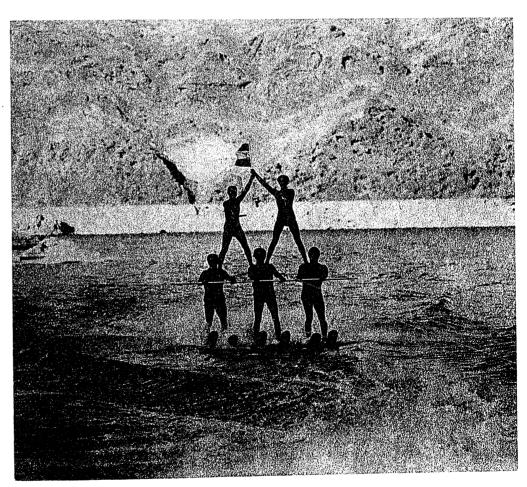
Rey - 12 kilometers south of Tehran, not only is the site of the ancient city of Rhages, but also contains the tomb of Reza Shah the Great. When in season, the visitor can see the colorful and interesting method of washing carpets outdoors.

Caspian Seaside - reached in

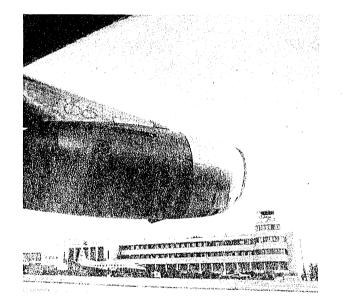
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four hours of driving through beautiful scenery, with sandy shoreline and clean blue waters is an excellent summer resort. Ramsar is well known for its extensive hotel facilities.

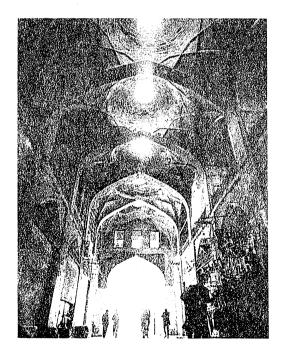
It is clear from this description of Tehran that the capital of Iran has all the amenities of a large metropolis while preserving its heritage and colorful traditions.

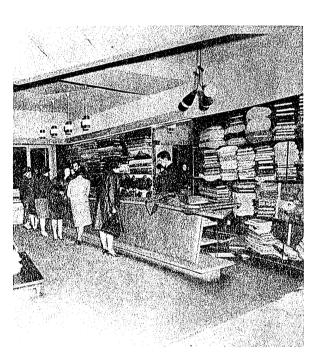


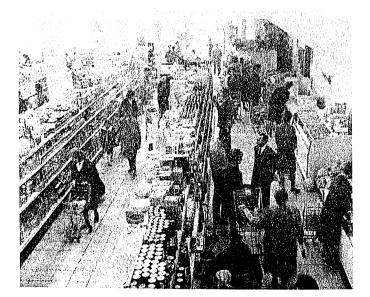
Water-skiing in Amir Kabir Dam near Tehran.



Main terminal of Mehrabad Airport.



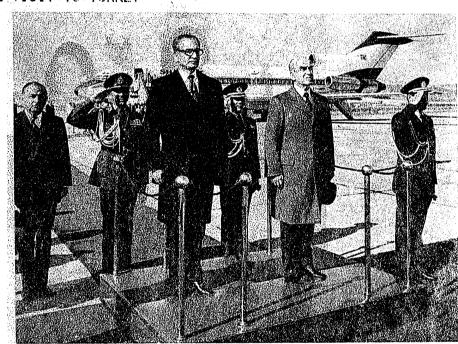




A supermarket in Tehran.

CURRENT EVENTS:

ROYAL VISIT TO TURKEY



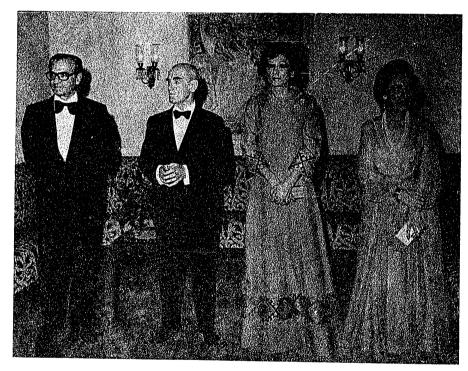
The Shahanshah and President Kornturk at the airport in Ankara.

At the invitation of the Turkish President and Mrs. Koruturk, Their Imperial Majesties, the Shahanshah and Empress Farah left Tehran on October 28 for a six day state visit to Turkey. During the trip, issues such as CENTO defense arrangements, regional economic cooperation, the Cyprus issue, oil, the prospect of joint arms production and overall bilateral relations were discussed in detail.

The Shahanshah and Shahbanou were met at the airport in Ankara by President and Mrs. Koruturk. At a banquet in honor of Their Imperial Majesties, the Shahanshah stated that extensive economic and political cooperation between the two countries, especially in the Regional Cooperation for Development (R.C.D.) "is a basic factor of stability

and security in the region." He expressed "sincere hope" that the Turkish and Cypriot communities on Cyprus would soon resume talks to work out a mutually satisfactory solution to their problem. His Imperial Majesty also noted that the technical and economic cooperation agreement signed between the two countries during Mr. Koruturk's June visit to Iran would serve as a basis for expanded bilateral relations and contact.

On October 30, Iranian and Turkish delegations reached agreement on expanding cooperation in agriculture, tourism, trade and transport. Turkish Premier Demirel said that bilateral cooperation in these fields would be increased and details of specific projects will be pre-



Their Imperial Majesties with President and Mrs. Koruturk in Ankara.

pared later. Iran agreed to extend \$1.2 billion worth of credits to Turkey to finance improved transit facilities in Eastern Turkey for Iranian imports and exports. While the talks were being held in Ankara, the Empress visited a women's educational center in suburban Ankara, where some 800 women and girls are taught tailoring, embroidery, flower arrangements in order to revive Turkish handicrafts. Later the same day, Empress Farah inaugurated an exhibition of paintings where the works of 150 contemporary artists were displayed.

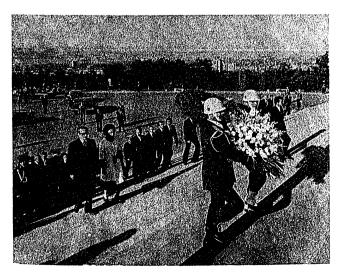
On October 31, Their Majesties flew to Izmir (port city on Turkey's west coast) for two days of rest and sightseeing. Shortly after their arrival, the Shahanshah and Empress visited Ephesus,

known as the world's best preserved Ionian cities and associated with the beginnings of ancient Greek philosophy and Christianity.

At an evening banquet. the Shahanshah stated that Iran and Turkey did not have any differences whatsoever and they enjoy common interests in all imaginable fields. "So, when the interests of the two countries are so common, should we not base these relations on sounder foundations to be able to meet the future?" The Iranian Monarch asked and added that this is exactly what was being undertaken. In reply to questions, the Shahanshah said that he would like to see greater cooperation between India, Pakistan, Afghanistan and Iran. He noted that Iran could become an important trade corridor between these countries and the West.



His Imperial Majesty at the Turkish Parliament.



Their Imperial Majesties lay a wreath at Ataturk's tomb in Ankara.

In a joint communique issued at the end of the Shahanshah's visit, the two nations stressed that the states of the Persian Gulf should safeguard the waterway's security without foreign interference and that the Indian Ocean should become "a zone of peace, free from big power rivalries, tension and military escalation." The document also revealed that Iran and Turkey have identical views on the Middle East, the Cyprus conflict, international peace and bilateral relations. A new economic order based on equal rights and respect for a nation's sovereignty over its resources was called for in the communique. The industrialized nations were called upon not to follow financial and economic policies which would jeopardize the economic stability of the developing nations. The communique expressed pleasure with the resu-Its of the preliminary conference between oil producer and consumers in Paris and it supported the Shahanshah's proposal for an OPEC financial fund to assist developing countries.

Before His Imperial Majesty returned to Iran on November 2, (the Shahbanou had returned on November 1), he told Turkish newsmen that Iranian and Turkish experts would study the possibility of joint armament production which had already been discussed in the past. In response to a question, the Shahanshah said that a foreign company has been preparing studies on a gas pipeline from Iran to Europe via Turkey but a final decision would be made after the report is completed. Regarding oil prices, the Monarch stated that the forthcoming Paris Conference would consider the question of oil prices. He said the chief issue was the replacement of oil as a source of energy because oil was exhaustible.

SHAHBANOU RECEIVES INTERNATIONAL PRIZE



Iranian Ambassador Ardeshir Zahedi receive the International Women's Year Prize in Chicago on behalf of Empress Farah.

On November 6, the Social Justice Committee for Women chose Empress Farah as the world's outstanding woman and awarded her the International Woman's Year Prize. The Iranian Ambassador to Washington, Ardeshir Zahedi, received the prize on behalf of Her Imperial Majesty in a ceremony at Chicago City Hall.

In a message to the gathering, the Empress enumerated the steps taken in Iran to promote literacy and general education. She stressed that no effort would be spared in this vital area.

The Shahbanou stated:

"Fifty years ago, when the national revival movement of the

Iranian people was initiated, the total number of Iranian youth who were studying in primary, secondary and higher educational schools was 40,000, which was only 1/400th of the total population of Iran at that time.

In the current year the number of Iranian children who are studying in primary schools alone is more than four million, namely 1/8th of the total population of the country. I have not included in this calculation the number of students in secondary and high schools, the preparatory classes, the technical and vocational training centers, night schools, the training schools for talented children and especially the anti-illiteracy and vocational training programs.



Ambassador Ardeshir Zahedi at Chicago City Hall ceremony.

The establishment of antiilliteracy schools throughout
the country is one of the most
successful initiatives of the
great social revolution of
"The People and Shah", which
was initiated in our country by
the Shahanshah of Iran 13 years
ago."

"Therefore, I am pleased to inform you that presently a vast overall effort is under way in our country to extend education, quantitatively and qualitatively, in which women in particular have an important role. The educational institutions of our country have been expended to a great extent in recent years. In this regard it is only sufficient to note that the fund allocations for education in our country in the current year is approximately 1/10th of the total government budget.

The law for compulsory and free education in the primary and preparatory classes in Iran is

vigourously enforced, and in the morning hours, cake, milk and fruit are distributed free in schools by the government. During the last ten years, the number of students in primary schools increased 170%, secondary schools 307%, technical and vocational teaching centers 1350%, teacher training colleges 554% and universities 150%, as a result of the expansion of educational programs."

Jan.

"In regard to the combat against illiteracy, my country can proudly claim that one of its activities is an endeavor to create and expand a world campaign against illiteracy. From the very beginning we have visualized that in a world of which approximately one billion people are illiterate, the struggle against illiteracy is not only a national prerogative, but each country must share in this combat on a world scale. Therefore, in the year 1964, upon the proposal of His Imperial Majesty,

At this international congress the Shahanshah of Iran suggested that each country allocate a fixed percentage of its military budget and put it at the disposal of Unesco to provide the financial requirements of this campaign. Iran was the first country which contributed to this fund. Unfortunately, a very limited number of other countries followed this step, in spite of endorsement by their representatives at that congress.

In Iran a committee called "The National Committee for the International Campaign Against Illiteracy" is actively working in close cooperation with Unesco. This committee each year gives an incentive award called "Mohammad Reza Pahlavi Award" to individuals and organizations in various countries who have made effective contributions towards the campaign against illiteracy.

We therefore have spared no effort to implement our firm belief that the question of education is one of the problems that carries the highest priority for developing countries. This fact is not only important from the humanitarian point of view, but is also vital for the economic and social growth of a society."







GERMAN PRIME MINISTERS VISIT IRAN

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In November, the Prime Ministers of both the Federal Republic and the Democratic Republic of Germany traveled to Iran in two separate state visits.

West German Chancellor Helmut Schmidt arrived in Tehran from Peking on November 2 for a two day official visit. Mr. Schmidt was met at the airport by top officials from the Iranian government and the German Ambassador to Tehran, Hans Georg Wieck. Over 50 German journalists and television reporters accompanied the Chancellor on his trip. In a speech at a banquet given in his honor, Mr. Schmidt stated that the world needed "a profound understanding and appreciation of economic relationships by responsible leaders on which all our countries depend." He stressed that no country in the world today could live in iso-

His Imperial Majesty received Chancellor Schmidt in audience at Niavaran Palace on November 3. The discussions, described as "objective and serious" centered on expanded economic cooperation and a wide range of economic and political issues. The Shahanshah told Mr. Schmidt that by 1980, Iran planned to import \$40 billion worth of goods, with a substantial portion coming from Western Europe. However, this required a corresponding growth in Iranian exports and access to the markets of the European Economic Community. The German Chancellor stressed his government's desire to see an improvement in Iran-E.E.C. relations. Mr. Schmidt and the Shahanshah agreed that efforts must be made to prevent confrontation between the



The second

Chancellor Helmut Schmidt of West Germany is greeted by His Imperial Majesty at Niavaran Palace.

industrialized, developing and oil-producing nations.

During the Chancellor's visit it was also announced that a new Iranian university would be established at Rasht, in Gilan (northwest Iran) with West German assistance. The new German-speaking university will receive assistance in designing the structure and curricula of the university, recruiting staff and planning applied research.

Other topics discussed were the tripartite Iran-West German-Soviet gas deal, the German nuclear reactor sales to Iran, the projected Bushehr refinery and general trade relations. Before leaving Iran on November 4, Chancellor Schmidt met with high government officials.

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the country and its people for the year 2,000," Mr. Sindermann declared.

In his prepared remarks, Mr. Sindermann called for the extension of detente to all regions of the world and the consolidation of political detente through military detente. The East German leader hoped that the results of the Helsinki Conference would promote detente in other continents of the globe as well. Mr. Sindermann said that international developments have shown that the Asian, African and Latin American countries have become a strong and active force in world politics. Referring to the increased responsibilities of these states, the East German Prime Minister stated that a lasting and durable peace would make it possible to develop international economic ties in conformity with the principles of the sovereignty of states, equality, non-interference and enunciation of force.

Mr. Sindermann and the delegation of East German officials visited Isfahan, the second largest city in Iran, on November 17. The following day the Prime Minister was received in audience by His Imperial Majesty at Niavaran Palace. Discussions centered around a variety of issues, including expanded cooperation in industrial production, possible joint ventures in agriculture, energy, trade and overall bilateral relations. After his meeting with high government officials, on November 19 Mr. Sindermann and his entourage visited Shiraz for one day, where they toured the ancient Persian capital of Persepolis and attended a reception in their honor which was given by the Governor-General of Fars Province.

Mr. Sindermann departed from Iran on November 20th.



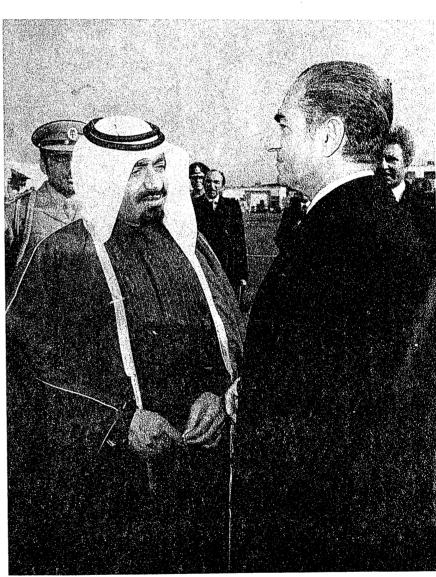
Prime Minister Sindermann of the German Democratic Republic meets the Shahanshah

Mrs. Hannelore Schmidt, wife of the German Chancellor was received by Empress Farah during the course of this visit.

On November 16, the Chairman of the Council of Ministers of the German Democratic Republic, Horst Sindermann and his wife arrived in Iran for a five day state visit. At a banquetdgiven in his honor, Mr. Sindermann referred to his visit in Iran as an exciting experience and he stated that Iran was a country which can look back on 2500 years of history. He added that it is a nation which has enriched mankind with lasting values of its humanistic traditions. "We view with great interest the efforts Iran is making in energetically and actively implementing His Imperial Majesty's reform program which is aimed at developing an independent national economy and preparing the country

EMIR OF QATAR IN IRAN

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His Imperial Majesty greeting Sheikh Khalifa of Qatar.

Sheikh Khalifa Bin Hamad Al Thani, the Emir of Qatar, made his first official visit to Iran in mid-November for four days. The chief purpose of this trip was to expand bilateral ties and cooperation between the two countries and promote peace, security and stability in the

Persian Gulf and Middle East.

Before leaving Doha for Tehran on Thursday November 13, Sheikh Khalifa stated that he welcomed His Imperial Majesty's proposal for close cooperation between littoral states of the The following day, November

-36

14th, Sheikh Khalifa accompanied Their Imperial Majesties to the Farahbad grounds to witness the showjumping tournament. Later in the day, he laid a wreath at the tomb of Reza Shah the Great and then received the Arab Ambassador to Tehran.

The Shahanshah and Sheikh met on Saturday November 15th in Niavaran Palace for extensive discussions regarding bilateral relations and a thorough appraisal of the current Mideast situation. The exchange between the two leaders contributed to security in the Persian Gulf. Qatar "wholeheartedly" agreed with the need for regional security to be insured by the regional countries without outside interference. As a result of the meeting, bilateral collaboration will be expanded and specific projects, including joint ventures will be discussed at lower levels between officials of Iran and Qatar.

In a joint communique issued at the end of the Sheikh's four day visit, solidarity and sincere cooperation between Iran and Qatar was cited as a factor in "blazing the trail of success" in national development and public welfare plans in the two countries. The security of the Persian Gulf should be maintained through regional cooperation totally free of outside influence. Peace in the Middle East is possible only when all occupied Arab territories are relinquished and the legitimate rights of the Palestinians honored. Support was stated for declaring the Indian Ocean a zone of peace, free from big power rivalries and to establish the region as a nuclear free zone. Persian Gulf to ensure the security and stability of this region. He also stated that cooperation between Qatar and

Iran would contribute to the

cause of regional and Middle

East peace.

The Sheikh was met at Mehrabad Airport by the Shahanshah where he was accorded full military and civilian honors. On his arrival, the Emir of Qatar stated that he was visiting Iran to consolidate the ties of brotherhood and cooperation between the two countries. Qatar viewed Iran's march toward economic and social development under the leadership of the Shahanshah with "wonder and admiration". From the airport, the two leaders went by motorcade to the Shahyad Monument where the Mayor of Tehran, Gholam Reza Nikpay, formally welcomed the Sheikh to the capital and presented him with a key to the city. On Thursday evening the Shahanshah gave a banquet in honor of Sheikh Khalifa which was attended by top Iranian officials and members of the Emir's entourage.

Ties or

The Shahanshah and Sheikh Khalifa stressed that all nations must be free to develop and use their natural resources. The developing countries must have access to the advanced technology of the industrialized world and that cooperation between the industrialized and developing countries is essential to solve global economic and financial problems. Therefore, the joint communique called for a new world economic order, based on equality, equal sovereignty and respect for all nations natural resources. The results of the four day official visit of the Emir of Qatar were termed "very fruitful"

Shortly before the Emir's plane took off, he issued a message of thanks to the Iranian government and people and said this visit was "an excellent opportunity to discuss our bilateral relations, which are reflected in the security and basically common interests of our nations."

PROFILE ON SEPTEMBER, 1975



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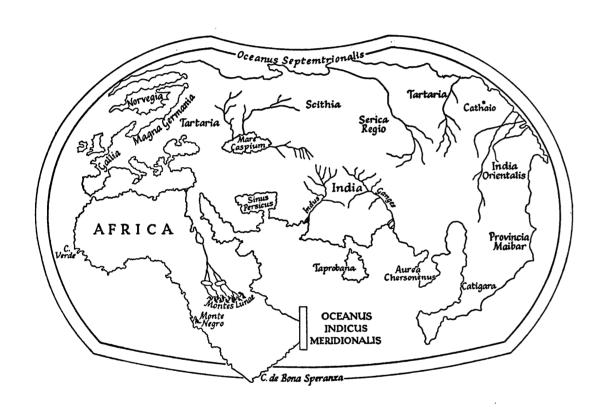
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"Iranian frontiers on the Persian Gulf extend to the Northern reaches of the Indian Ocean. Iran has suggested that the Persian Gulf and the Indian Ocean should not become an arena of competition between the big powers. As His Imperial Majesty emphasized during his extensive trip to Asia last year, Iran believes that the countries bordering on the Indian Ocean should cooperate in all fields to make the Indian Ocean a zone of peace. Iran hopes that the peace and security of this region can be assured and regional cooperation promoted under the aegis of a policy termed in the September 19, 1975. Congressional Record as the Pahlavi Doctrine. But, as His Imperial Majesty has repeatedly stated, we must be realistic. So long as one outside power is present in the Indian Ocean we cannot object to the presence of another foreign power."

Excerpts from a speech given by Ambassador Ardeshir Zahedi at the World Affairs Council in San Francisco on Thursday, September 25th,

THE INDIAN OCEAN



. . .

Iran's Concept of Security and Non-Interference

"May I seize this opportunity .. to present the idea of a kind of wide regional cooperation; a cooperation that could bring together countries like Iran, the sub-continent of India, Pakistan, Bangladesh, Thailand, Burma, Malaysia, Singapore and Indonesia which form in the northern and eastern tier of the Indian Ocean... Economic intercourse can bring these countries together in an effort to make their own lives better, but at the same time the achievement of this objective will contribute to the stability of our world. The common goal of having peaceful,

innocent, but secure navigation will be one of the factors that we should consider now for the future... If you let go occasions of cooperation that could have been, while you have the time and the opportunity to bring people together, cement ties and assure cooperation and stability, then history and the people who come after us will reproach us for not having tried. Therefore, it is necessary to promote greater regional and international cooperation in order to safeguard the supply routes of oil to all

Excerpts from His Imperial Majesty's speech on his official visit to Singapore. September, 1974.

"It is absolutely necessary that the countries of the Indian Ocean should get together and show to the world that there is really no necessity for outside powers to send their men of war in those waters."

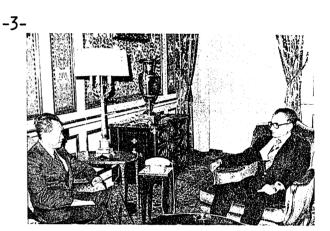
Excerpt from His Imperial Majesty's response before the National Press Club, Canberra, Australia.
September, 1974.

Due to the naval presence of the superpowers in the Indian Ocean with the possible risk of conflict, the importance of trade and oil in the region and the inherent strategic importance of the Ocean, His Imperial Majesty has been urging that the littoral states of the Indian Ocean further regional economic cooperation for their mutual benefit and assume the responsibility for security in the region to guarantee free and innocent passage for all nations.

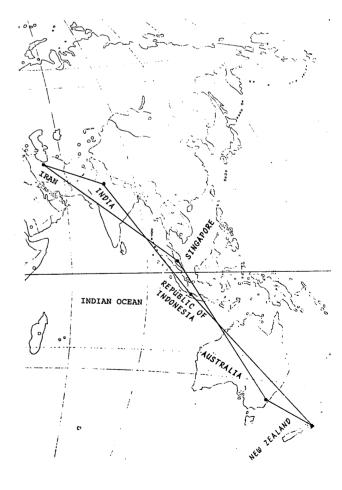
Geographical Features

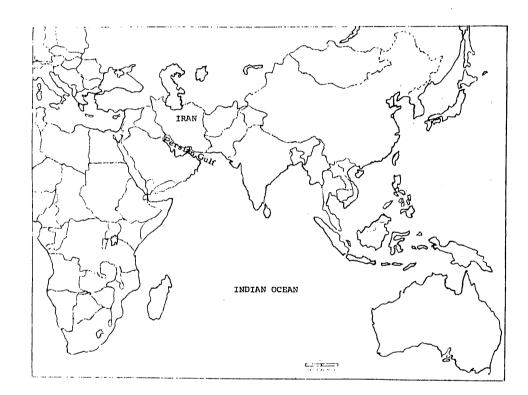
After the Atlantic and Pacific Oceans, the Indian Ocean is the third largest in the world, comprising 20% of the total ocean area or 28,400,000 square miles (17,000,000 square miles if the area below 45° south latitude is excluded). Compared to other oceans, the Indian Ocean has few seas; two inland seas in the north - the Persian Gulf and Red Sea and the marginal seas are the Arabian Sea to the northwest, the Andaman Sea to the northeast and the Timor and Arafura Seas to the east.

The ocean is bounded by India, Pakistan and Iran to the north; Antarctica to the south, the Arabian Peninsula and Africa to the west; Australia, the



His Imperial Majesty with the Prime Minister of Singapore





Sunda Islands of Indonesia, and the Malay Peninsula to the east.

The Strait of Malacca, lying between the Malay Peninsula and the island of Sumatra, forms the principle trade route between the Indian and Pacific Oceans. In the southwest it joins the Atlantic Ocean south of the southern tip of Africa, and to the east and southeast its waters meet those of the Pacific.

Because most of the ocean is in the Southern Hemisphere and because its trade routes cross the tropical zone, the Indian Ocean is sometimes considered a tropical sea. Indeed, the major trade routes in the ocean lie in the tropical and temperate zones, which facilitates year round navigation. The chief navigational routes are from

the Cape of Good Hope and Strait of Malacca respectively. The shallow waters of the tropical zone are characterized by numerous corals, coral islands and atoils. Abundant sea life is found in the open expanses of the ocean to a depth of 300 feet including squid, shellfish, flying fish, Portugese men-o'-war jellyfish, sharks, turtles, whales, dolphins and seals. The edible varieties of fish have long been a part of the indigenous diet of the people of the region and fishing a traditional pursuit of coastal inhabitants.

Historical Perspective

Since the dawn of history, the Indian Ocean has carried commercial and cultural traffic: Egyptians, Phoenicians and Indians made long journeys in its

northern portions during the first millenium B.C. and in Roman times the spice trade was as important as petroleum has become today. With the decline of the Roman Empire, there was a renaissance of Persian power in the Indian Ocean when the Sassanid dynasty defeated the Parthians in 228 A.D. After defeating the Azumites of Ethiopia in the Arabian peninsula in 570 A.D. Iranian sovereignty in the Indian Ocean was established. Trade was then completely controlled by Iran and the center of commercial activity shifted from the Red Sea to the Persian Gulf.

The religion of the Sassanids, Mazdaism, spread to some parts of India, China and the Levantine states of the east Mediterranean. In this period the bank as a legal institution was created and according to the historian Ghirshman, the word cheque and the French word avaliser (to endorse) were taken from the Farsi. With the Arab conquests of the seventh century, Arab historians, such as Masudi, Idrisi, Ibn Battuta described the Indian Ocean and Moslem merchants, many of whom were of Persian origin, introduced the astrolab, rice, coffee, and sugar cane to the rest of the world and spread such Chinese inventions as gunpowder, paper, the compass, the saddle and stirrups. After the fall of the Abbasid Caliphate in 1258, great Chinese fleets dominated the Indian Ocean between the 13th century and 1433 until internal conflicts beset China.

The voyage of Portugese navigator, Vasco da Gama, around the Cape of Good Hope in 1498 effectively passed control of the Indian Ocean to the European powers, which was to continue into the twentieth century.

In 1622, the enlightened ruler, Shah Abbas, allied Iran with a British naval force in

the Persian Gulf to drive the Portugese from the island of Hormuz in the Persian Gulf. By doing so, he encouraged British and Dutch merchants to trade at the port town of Bandar Abbas, making it the center of silk exports.

A.

In the eighteenth century, Britain emerged as the foremost naval power and eventually dominated India and most of the littoral states of the Indian Ocean. Britain's rivalry with France, Russia and Germany before World War I led to occupations in Southeast Asia and the Persian Gulf. Following World War II, most of the countries bordering the Indian Ocean acquired their independence from the colonial powers as European superiority gave way to the strength of the United States and the U.S.S.R., the new superpowers.

The Current Situation

Within the past decade, the littoral states of the Indian Ocean have shown an increasing awareness of the strategic importance of this ocean and a growing interest in maintaining their own regional security. The reasons are multifaceted.

The Indian Ocean, in contrast to the Atlantic and Pacific Oceans, has no superpower on its littoral. Consequently, in the absence of a local power, the major powers sought to extend their influence through diplomatic means, political alliances and also through the establishment of naval facilities, communications stations and by "showing the flag" in the region. Rivalry among the powers could encourage them to increase and expand their naval activities in the Indian Ocean, thus raising the danger of conflict in the area. The following list of major military installations in the Indian Ocean clearly shows that the major powers are well

entrenched in the region. In addition, it should be remembered that many of the countries, including the regional powers, have defense treaties with the superpowers on a bilateral or multilateral basis.

As the number of bases and facilities increase in the region, the maintenance of an everincreasing naval presence in the Indian Ocean is made possible. The chart below clearly illustrates the point.

Indian Ocean Ship Days per Year

1970 U.S. U.S.S.R. 4,906

1971 1972 1973 1974	1,337 1,448 2,154 2,800		4,023 6,404 6,473 10,000
1975	2,900		10.500
(Project of year)	ion based	on	first half

Until World War II, the littoral states of the Indian Ocean were subjected to colonial rule by the European powers. The decline of European power coupled with the rise of nationalist sentiment in the post-war era led to the independence of the regional states. However, many nations were incapable of immediately maintaining an adequate defense and Britain, which was the preeminent naval power and largest colonizer in the area, retained a network of strategic bases in the Persian Gulf and

Base	Purpose	Power Concerned	Remarks
Harold E. Holt, North- west Cape, Western Australia	Defense communicat- ions station in US global communications system	U.S.	The station is under the joint operational control of the US Navy and Australia. The station cannot be used for other than defense communications without the agreement of the Australian government.
Asmara, Ethiopia	Military com- munications base, relay and satellite track- ing station in US global com- munications network		U.S. staff reduced to 50.
Garcia, BIOT	Naval communi- cations center (part of global system) airfield naval facilities	US/UK	Joint facility. Plans are to ex- pand Diego Garcia into a permanent naval and air base
Somalia	Naval facility and communicat- ions station	USSR	Storage, replenishment and communications facility
Communicat-	A ground term- inal for de- fense space communications involving satellites		The facility oper- ated jointly with Australia.
Joint De- fense Space Research Facility, Alice Springs Australia	To carry out a vari- ety of de- fense space research functions	U.S.	Jointly con- trolled by Aus- tralia and U.S.
Bahrain	Naval base for Mideast Task Force, communicat- ions station	U.S.	
Massawa, Ethiopia	Port facili- ties for naval vessels	U.S.	Serves Asmara base.
Vacaos, Mauritius	Tracking and telemetry, naval radio station, airfield	US/UK	Important observation post.
Mahe, Seychelles	Communicat- ions station	U.S.	Maintained by US Air Force
Aden, South Yemen	Submarine base and airport for reconais-sance of Suez Canal traffic. Naval replenishment and repair facilities.	h	Airstrip has been improved. Socotra Island at eastern entrance to Gulf of Aden for maneuvers.
Um Qasr Iraq	Port of call	USSR	

United Kingdom, French and Chinese Facilities in the Indian Ocean

The second

	In the Indian ocean			
Base	Purpose	Concern	Remarks	
Gan Island, Maldives	Communications airfield, RAF staging post, naval fuel sup		Earth station for Skynet.	
Masirah Island	Communications RAF staging po	UK	US landing rights granted in Jan.197	
Mahe, Seychelles	Airfield, harbo	r UK		
Mauritius	Harbor facili- ties	UK		
Djibouti, Territory of the Afars and the Issas	Airfield, har- bor, radio sta- ion, military base, naval forces, air forces	France t-	Of great strategic importance if Suez Canal reopens.	
Tananarive, Malagasy Republic	Air base, troops	France	Headquarters of French forces in the South Indian Ocean. To be evacuated by 1977.	
Zanzibar, Fanzania	Telemetry for missile term-inal ballistics	China	Existence speculative	
Mayotte (formerly one of Comores (slands)	Naval port	France	Replenishment and repair of naval vessels. Could partially compensate for loss of Diego Suarez.	

Source: OIL, POLITICS AND SEA POWER, THE INDIAN OCEAN VORTEX. W.A.C. Adie, 1975 pp88-9. with revisions

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Indian Ocean regions. In January, 1968, the British Labor government announced a withdrawal of a all forces east of Suez. Except for a nominal British presence in Singapore, the decision was implemented by December, 1971. The decision had a two-fold effect:

- 1) Two months after the announcement, the Soviet fleet entered the Indian Ocean where a permanent presence was subsequently established. The U.S. assumed some of the responsibilities of the withdrawing British Navy and modestly strengthened the Middle East forces on Bahrain and Diego Garcia installations, deploying three more modern ships in the Persian Gulf. Also, more frequent visits were made by the U.S. carrier task forces, beginning with the visit of the Enterprise at the time of the 1971 Indo-Pakistani war.
- 2) The littoral states, including Iran, became increasingly concerned about their security and the rise in superpower activity in the region. Several conferences and U.N. resolutions reflected anxiety.

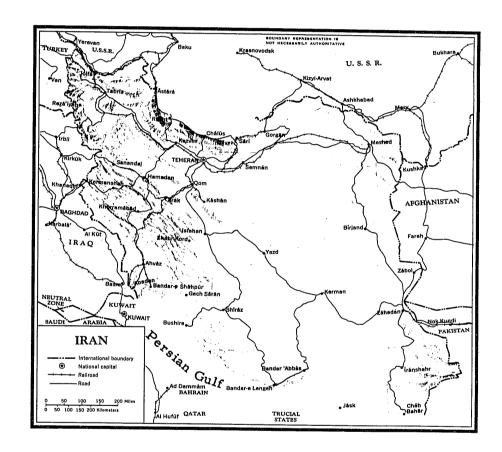
The Lusaka Declaration of September, 1970 called on all states to respect the Indian Ocean as a zone of peace from which great power rivalries as well as bases should be excluded and stated that the area should also be free of nuclear weapons. General Assembly resolution 2832 of December 16, 1971 went even further and declared the Indian Ocean a zone of peace. The three most important provisions of the resolution are in brief:

"The General Assembly...

1) solemnly declares that the Indian Ocean... is hereby designated for all time as a zone of peace; 2) calls upon the great powers.. to enter into immediate consultations with the littoral states of the Indian Ocean with a view to:

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- a) halting the further escalation and expansion of their military presence in the Indian Ocean;
- b) eliminating from the Indian Ocean all bases, military installations and logistical supply facilities, the disposition of nuclear weapons and weapons of mass destruction and any manifestation of great power military presence in the Indian Ocean conceived in the context of great power rivalry.
- 3) calls upon the littoral and hinterland States of the Indian Ocean, the permanent members of the Security Council and other major maritime users of the Indian Ocean, in pursuit of the Objective of establishing a system of universal collective security without military alliances and strengthening international security through regional and other cooperation, to enter into consultations with a view to the implementation of this Declaration to ensure that:
- a) warships and military aircraft may not use the Indian
 Ocean for any threat or use of
 force against the sovereignty,
 territorial integrity and independence of any littoral or
 hinterland State of the Indian
 Ocean in contravention of the
 purposes and principles of the
 Charter of the United Nations;
- b) ...the right to free and unimpeded use of the zone by the vessels of all nations is unaffected;
- c) appropriate arrangements are made to give effect to any international agreement that may ultimately be reached for the maintenance of the Indian Ocean as a zone of peace."



This resolution was unanimously adopted, by a vote of 61 in favor and 55 abstentions.

In the 27th U.N. session the following year, 21 African and Asian countries signed a similar resolution No. 2992 which demanded that the Indian Ocean be declared a zone of peace. The U.N. General Assembly resolution was decided by a vote of 94 in favor and 33 abstentions. All leading Asian nations, including Iran, voted for the resolution. Resolution No. 3080 and 3259 were adopted by the 28th and 29th sessions of the General Assembly (1973 and 1974 respectively) reaffirming the Indian Ocean as a zone of peace, by large majorities with no opposition votes cast. The U.N. resolution which passed

last year established an Ad Hoc Committee on the Indian Ocean as a tangible and practical step in implementing the U.N. resolutions of the three previous years. In addition, numerous heads of state in this period have declared their support for non-nuclear Indian Ocean free of superpower interference.

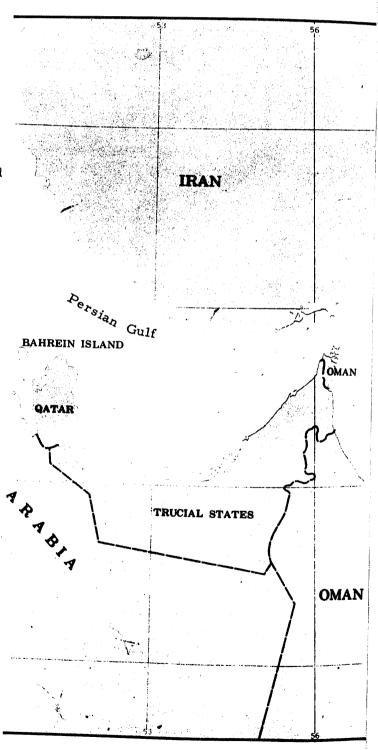
In commercial terms the Indian Ocean has increased in importance as the volume of international trade grows and world reliance on Persian Gulf oil continues to increase. Approximately 25% of the total world population (about 1 hillion people) live in the littoral states of the Indian Ocean. However, their percentage

"Approximately 7.9 percent of the United States' oil comes from the Persian Gulf area; (another 8.9% of refined oil is imported from the Persian Gulf via the Netherlands)approximately 79.6% of Japan's; and approximately 64 percent of Western Europe's."

In return the oil revenues earned by the countries of the Persian Gulf last year totalled about \$60-65 billion which was largely used to purchase imports, technology and arms not available in the Gulf region. Transport by water is in most cases less expensive than overland rates, and therefore most imports arrive via the Indian Ocean sea lanes.

Thus, in noting its strategic and commercial importance, the littoral states have a vital interest in preserving the security and peaceful navigation of the Indian Ocean.

* Averaging about one large tanker every 12 to 14 minutes.



Iran's Interest and Policy

II

The Persian Gulf

"What do I need more territory, for? All I am concerned about is the security of my country, and Iran's security is intimately related to the security and stability of the Persian Gulf region."

Statement by His Imperial Majesty May, 1974

Bordering both the Persian Gulf and Indian Ocean, Iran obviously has a great stake and interest in all developments on its southern boundary. The Persian Gulf is of paramount importance for Iran because the nation's major ports are located there and its oil exports pass through the Persian Gulf the world markets. The Sea of Oman, which is an extension of the Indian Ocean, becomes the Persian Gulf at the Straits of Hormuz. The Straits are 24 miles wide at their narrowest point and are recognized as a most strategic point because 16-19 million barrels of oil from the Persian Gulf states (about 1/3 of total world production and 60% of the oil in world trade) daily pass through the channel as well as a wide range of imports. While the Strait of Hormuz itself is over 20 miles wide, the principal tanker channel around Rasl Musandun is only 3 miles in width. The Persian Gulf extends from the Straits of Hormuz in a north-western direction toward Iraq. It is about 500 miles long and between 110-180 miles wide, encompassing an area of close to 10,000 square miles. The nine littoral states of the Persian Gulf are Iran, Iraq, Kuwait, Bahrain, Saudi Arabia, Qatar,

of Arab Emirates and Oman.
Besides the strategic and commercial importance of the Persian Gulf, fishing and construction of dhows (Arab sailing boats)
continue to be indigenous
occupations along the coast.

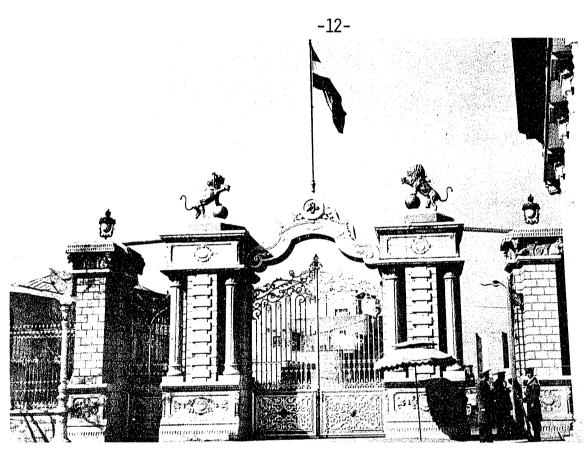
Astronomy

Although a founding member of the Central Treaty Organization (CENTO), the Shahanshah began to realize in the 1960's that Iran would have to rely upon its own defense to protect its national interests. There were many reasons for this decision. Firstly, the War in Yemen 1962-67, the Indian Pakistan conflicts of 1965 and 1971, the Arab-Israeli Wars,

Afghani-Pakistani tensions, the Soviet treaties of friendship with Iraq and India and the Dhofari rebellion clearly illustrate potential for conflict in this region. The Indian Pakistan war of 1965 and the festering Iranian-Iraqi dispute revealed that CENTO could only play a limited role in safeguarding its members' security.

Secondly, the British withdrawal from Aden in 1967 and more importantly the announcement of the British government in January, 1968 of its intention to withdraw all its military forces east of the Suez by the end of 1971, greatly heightened Iran's concern for the security and stability of this area and reinforced the need to prevent a power vacuum from being exploited by local forces whose objectives were to alter the political status quo.

Thirdly, in the decade of 1960-70, there had been a growing importance of oil to Iran's economy. The nation's oil exports rose from 1.07 million barrels per day in 1960 to 3.83



The Majlis

million barrels per day a decade later while revenues in the same period increased from \$285 million to \$1.104 billion. As an added factor to oil's growing importance, exploitation of offshore wells began in 1957 and construction of an oil exporting terminal was begun on Kharg Island, some 30 miles off the coast of Iran. (Kharg Island is the largest marine oil-loading terminal in the world, capable of loading up to 12 tankers at once with a capacity of 6,000,000 barrels of crude per day).

Accordingly, the Iranian Parliament (Majlis) passed a bill in the autumn of 1965 to strengthen the armed forces, particularly the navy, at a cost of \$400 million. As a result of the British government's announced troop pullback, British and American naval vessels were subsequently purchased and in December of

1968, Iran began a program of modernizing the air force by procuirng F-4 fighter aircraft from the United States. Iran has also developed the largest fleet of hovercraft in the world.

Hence, Iran's decision to expand its self-defense capability in the last 15 years in the Persian Gulf must be examined in the context of the developments mentioned above. As the Shahanshah has emphasized on many occasions, Iran has no aggressive intentions in the Persian Gulf or elsewhere. It seeks only to protect its national interests and preserve freedom of innocent passage in the Persian Gulf -Indian Ocean region and to promote an environment of cooperation, stability and security among the riparian states. The Shahanshah's peaceful intentions in the Persian Gulf are exemplified by Iran's policy regarding

the independence of Bahrain, the Persian Gulf islands issue, Dhofari rebellion, the continental shelf agreements, the accord with Iraq and its support of a regional security agreement between the Persian Gulf states.

In a move of statemanship and moderation, the Shahanshah in 1970 facilitated and recognized the independence of Bahrain, which had always been considered an integral part of Iran. The Iranian government permitted a referendum in Bahrain under U.N. auspices so that the people could decide their own destiny.

In order to prevent radical elements from exploiting the power vacuum in the Persian Gulf resulting from the British troop withdrawals between 1968-71, the government of Iran let it be known that it would actively cooperate with any regional state to promote security and stability in the region. Responding to a request for aid from the Omani government, Iran sent 1500-2000 Iranian troops. British Army advisors are assisting the Omani government in ending the rebellion by the Popular Front for the Liberation of Oman (PFLO) in Dhofar Province. R.M. Burrell and Alvin J. Cottrell in Iran, Afghanistan and Pakistan:
Tensions and Dilemmas Wrote the following:

"There has been notable success in containing the rebellion within the past two years - a fact that has been clearly reflected, for example, in the decreasing number of military incidents by the insurgents. The insurgent forces have been driven far back from the critical area of Salalah and the airbase located there. The road between Salalah and Muscat is now completely in the hands of the Sultan. The Iranian forces have built up a defensive line parallel with the border to

the People's Republic of Yemen - called the DEMEVAND line - to prevent supplies reaching the guerillas from that sanctuary. Last year, over 1,000 defections from the PFLO were reported."

Continental Shelf Agreements

In demonstration of its desire to foster a spirit of cooperation and harmony with all the littoral states of the Persian Gulf, Iran has signed several important agreements with other Persian Gulf states to delineate the continental shelf in the Persian Gulf. The agreements established a shore-to-shore median line in the Persian Gulf and affirmed the limits of the territorial waters at 12 miles from the low watermark. Iran signed continental shelf agree ments with Qatar in September, 1969, Saudi Arabia in October, 1969, and Bahrain in June, 1971. The agreements prohibit the drilling of wells 500 meters on either side of such lines, unless needed for technical information and agreed to by all parties concerned. In 1969, it was estimated that the new accords opened offshore resources whose reserves were estimated at 10 million barrels.

In November, 1973 the Foreign Ministry announced that Iran's exclusive fishing zone in the Persian Gulf and Sea of Oman would be set at 50 miles from the "baseline" from which Iran's territorial waters are measured. Where the fishing zone of Iran and of another coastal state overlap, and other agreements do not exist, the fishing zone will be determined by a median line equi-distant from the baselines of the two countries. In the Persian Gulf, the outer limits of the fishing zone have been set at the super adjacent waters of Iran's continental

A. Car

shelf. If the continental shelf has not been delineated by agreement, the exclusive fishing zone's outer limits shall be defined by a median line equidistant from the baselines of Iran and the other country.

However, the limits of Iran's continental shelf will continue to correspond to the continental shelf line when it has previously been specified in a bilateral agreement.

The crowning achievement in promoting regional cooperation and security was the March, 1975 Iranian-Iraqi accord in which the Shahanshah and Iraqi Vice-President Saddam Hussein al-Takriti reinstated good neighborly relations by establishing the Thalweg line of the Shattal-Arab as the boundary between the two nations and declaring their mutual respect for the territorial integrity of both nations. The accord, ending years of hostility between the two nations, was widely recognized as a step toward fuller cooperation among the Persian Gulf states. Furthermore, in meetings with His Imperial Majesty last month, Saudi Arabian Crown Prince Fahd and Arab League Secretary General Riad, the importance of Persian Gulf security and cooperation was stressed. A joint communique issued at the end of the Crown Prince's visit emphasized Iranian-Saudi cooperation in preserving a stable, peaceful Persian Gulf, free of foreign influence and bases. To emphasize Iran's sincere desire to safeguard the security of the Persian Gulf region by the littoral states, the Shahanshah in an interview on July 27th with the Kuwaiti newspaper "Al Siyassah" stated, "Iran is ready to accept anything that the majority accepts. We don't want to propose any ideas of ours. We are ready to

accept from the closest alliance what could be possible from the loosest form of cooperation."

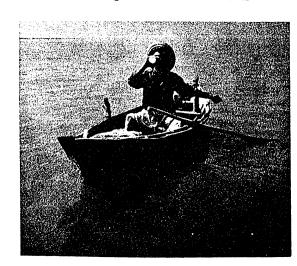
Fishing

Beyond the strategic importance of the Persian Gulf and its transport function, the fishing industry in the Persian Gulf and Sea of Oman have become increasingly important to Iran.

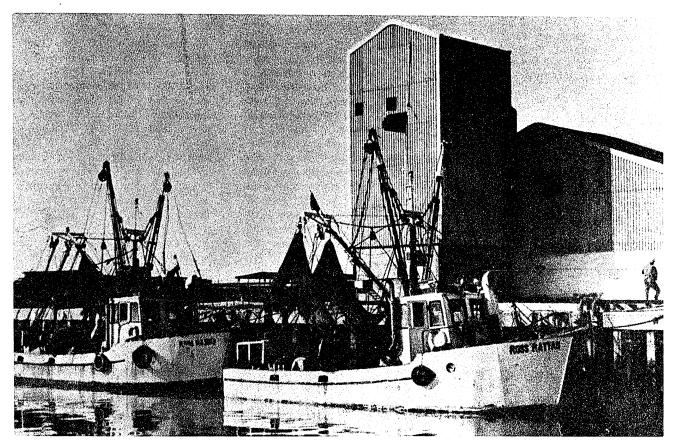
According to some ichthyologists, 150,000 to 200,000 tons of various fishes can be caught in this area each year.

The Southern Fishing fleet belongs to the Southern Fisheries Company (a State concern) and consists of a mother ship named Arvand (3,000 tons) and 15 trawlers. It has all the modern equipment for freezing the catch, \bar{pack} ing it and keeping it in cold storage. In addition to a large quantity of prawns, which are mostly exported, the annual catch by this fleet amounts to between 14,000 and 16,000 tons. Output of the Bandar Abbas Cannery is at present about 2.5 million cans a year and it is hoped that this production will go up to 10 million cans a year in the near future.

Iran's shrimp catch from the



Fishing in the Persian Gulf



Fishing boats in the Persian Gul

Persian Gulf amounted to about 3,000 tons in 1973, showing an increase of 2,000 tons over 1972. It was announced in September, 1974 that the Southern Fisheries Company will greatly expand its operations within the next few years through improved management and private sector participation. It is planning to become a mother company, assisting and encouraging private institutions to get involved in the fishing industry. The company will encourage private sector firms to provide funds and expertise and to cooperate in joint yentures. It will assist fishermen by both training and financing through cooperative companies set up with an initial capital of 1,000 million rials provided by the Plan and Budget

Organization. A project for the creation of a research and training center has already been approved and is expected to begin work soon. A second center is in the planning stage. The center is expected to improve production in neglected areas of the fishing industry such as lobstering. The plan for a new tuna processing and cannings company called the Jask Fishing Company has also been approved with an initial capital of 1,000 million rials.

A 30-million rial fishing company, known as the Jask Company, has been formed by the Southern Fisheries Company, the Agricultural Development Bank and the Industrial and Mining Development Bank, it was announced on October 22, 1974. The Jask Company will

catch, process and distribute marine foodstuffs in the Persian Gulf, Sea of Oman and the Straits of Hormuz. Its initial tasks will involve the preparation of feasability studies for a larger master plan, which would eventually result in the formation of related private companies, as well as investments of \$25 to \$30 million.

Fish Caught in the South (Tons)

		1974-75	(est.
Grade	1	200	
Grade		600	
Grade	3	20	
Grade	4	10	
Grade	5	30	
Tuna		600	
Sardin	nes	100	

Source: South Fishery Companies.

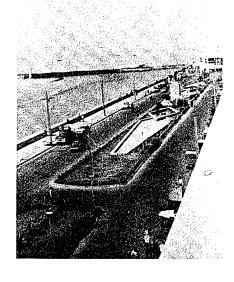
Iranian Ports and Port Facilities

The chart below shows the volume of cargo handled at the major Iranian ports in the Persian Gulf.

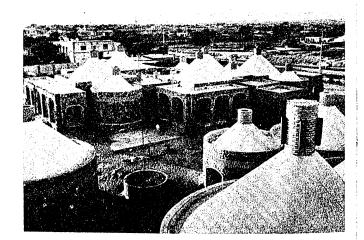
Cargo Handling Volume (March - September, 1974

	Loading	Unloading
Port	(Tons)	(Tons)
		•
Abadan	15,000	117,000
Bandar	,	,,000
Abbas	82,000	231,000
Bandar	02,000	231,000
	171 000	700 000
Shahpour	171,000	730,000
Bushire	6,000	28,000
Khorram-		•
shahr	180,000	859,000
		999,000

Because of the rapid pace of Iran's economic development, import of capital goods, consumer raw materials and foodstuffs had been rising so fast that Iranian ports have lagged behind in their expansion to cope with the growing volume. Port expansion has been carried out in the Persian Gulf as well as in the



Bushehr



Caspian Sea but these have been inadequate. Iran is now proceeding with a fifteenyear master plan for the development of all ports in the country. Iran is also planning to construct the greatest desalination facilities in the world along the Persian Gulf and Gulf of Oman by 1984. The plants, many of them nuclear-powered, will provide power and water for accelerated urban development and industrial activity in the southern region of Iran. The huge project will be undertaken with the cooperation of a consortium of international firms. A few smaller desalination plants are already providing water to the rapidly increasing population in the area.

Two Important Conferences

Symbolic of the nation's keen interest in Persian Gulf and Indian Ocean developments, Iran hosted a high-level conference in March, 1975 entitled "The Persian Gulf and Indian Ocean In International Politics." The three day meeting, held under the auspices of the Institute for International Political and Economic Studies in Tehran, attracted distinguished scholars from a number of countries in the region and elsewhere. In the twelve papers submitted, the topics of Persian Gulf security, the Dhofari rebellion and superpower rivalry in the Indian Ocean were discussed.

In July of this year, Iran, Saudi Arabia, Kuwait, the United Arab Emirates and other states agreed to hold a summit meeting of heads of state of all the Persian Gulf littoral countries. The announcement came at the end of the Islamic Summit Conference in Jeddah, Saudi Arabia. The summit is intended to "proclaim a determination to keep all foreign

influence out of the oil areas of the Persian Gulf.

Iran's Policy in the Indian Ocean

"Considering...the Persian Gulf and the Indian Ocean, with Iran's principal ports being along the 1,690 (1048. mile) kilometer coastline there, these sea routes are Iran's vital lifeline and Iran is fully interested in development in the area."

From address of Dr. Manouchehr Agah, Dean of Faculty of Economics, Tehran University, at a conference on Economic and Political Development in Relation to Sea Power Along the Routes from the Indian Ocean.

London, 1972.

Iran's policy toward the Indian Ocean should not be viewed as a separate policy from its Persian Gulf policy but rather as a logical extension and reflection of it. Iran has co-sponsored all four of the aforementioned U.N. resolutions regarding the establishment of the Indian Ocean as a zone of peace. In supporting the idea of regional cooperation and a nuclear free zone in the Middle East, the Shahanshah is fully cognizant of the continuous need to remove causes of regional conflicts and the rivalry between the superpowers. Oil exports, vital to Iran's current and future development as a modern, industrialized nation, presently exceed 5 million barrels per day from which Iran's revenue along with gas exports this year is estimated to amount to \$21,970 million.

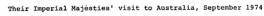
As noted in the Shahanshah's statement below, it is essential for Iran that the Persian Gulf and Indian Ocean remain safe for all international shipping.

"We have also declared that our hope is eventually to see the Indian Ocean as a zone free from external clashes or presence. I don't know if this will happen or when it will happen but until that day, we have no choice but to assure the defense of our interests in the Indian Ocean. I have to remind you that our country, in less than ten years time, will have an import market of \$40 billion a year. Most of that will come to our southern ports and so can only come through the Indian Ocean or the Suez Canal. So you can see how much interest, vested interest we have in the security of the Indian Ocean and in free navigation through the Suez Canal, the Red Sea and the Arabian Sea."

His Imperial Majesty's Press Conference at Blair House, Washington, D.C. May, 1975

Iran has taken concrete steps to enhance the security of the Indian Ocean and preserve freedom of maritime trade in the area. In December, 1972, Iran negotiated a treaty with Mauritius on the occasion of the Prime Minister of Mauritius' official visit to Iran. In return for port facilities, Iran provides Mauritius with economic assistance. The accord represents the first acquisition of port facilities by the Imperial Iranian Navy in 40 years. In conjunction with this aim, two new military bases have been constructed by Iran to reinforce the Iranian navy and air force along the southern boundary of the country. A naval base constructed at the port of Bandar Abbas on the Persian Gulf has been designated as the headquarters of the Imperial Navy. A large naval base and air station is currently under construction at Chah Bahar, a port southeast of Bandar Abbas at the juncture of the Gulf of Oman and the Indian Ocean, which is excellently suited to Iran's strategic goal of providing security in the







Their Imperial Majesties' visit to New Zealand, September 1974

northwestern Ocean extending down to Somalia and east to the subcontinent of India. As previously mentioned, Iran is assisting the Omani government in ending the Dhotar rebellion with the aim of preventing extremist, self-proclaimed "revolutionary" groups from creating instability in the region and threatening trade and commerce linking the Persian Gulf to the Sea of Oman and the Indian Ocean to the outside world.

In September, 1974 Their Imperial Majesties embarked on an energetic trip to Singapore, Australia, New Zealand, Indonesia and India to encourage regional cooperation among the littoral states. Also, within the past year, the Shahanshah has met with the leaders of Pakistan, Afghanistan and Turkey to discuss Indian Ocean affairs. His Imperial Majesty's concept of fostering regional cooperation was clearly outlined in speeches and press conferences during his September trip. The first stage would involve an economic union or "common

market" with the littoral states to the east of Iran extending to Australia. There are two reasons for the inclusion of states east of Iran:

- Iran shares close cultural and historic ties with the nations on its eastern boundary
- 2) These countries represent the largest markets and most developed economies in the region. A successful economic union would serve as an example to the other littoral states which might wish to join at a later date.

The latter two stages are summed up by His Imperial Majesty in a New Zealand news conference in September, 1974:

"This will be followed probably by some political, closer links between those countries and finally to have such a stability in the region that there will not be any necessity for some outside powers to the

Indian Ocean to have physical military presence."

"So, what we try to do is establish with all the countries of the Indian Ocean region secruity and stability that nobody could say that, well, these shipping lanes are not secure and we need to see to its security by our physical military presence."

"If such an organization, or whatever you want to call it, is formed, it must be on the basis of complete equality among the members and a real search of complementing each other. It is very clear that on our part, we have absolutely no desire to try to exploit others. As a matter of fact, we are now denouncing every kind of exploitation. It is not we who will try to do the same to others."

The Shahanshah clearly recognizes that the process of proceeding toward regional cooperation is necessarily gradual, although this issue should be important to all of the regional states. Joint communiques issued on His Imperial Majesty's trip to Australia, New Zealand, India and Indonesia stress the need for further cooperation among riparian states in economic and political matters. In his official visits to Iran and Yugoslavia this year, President Suharto of Indonesia stated with the Shahanshah and President Tito respectively, support for excluding the military presence of the superpowers in the Indian Ocean. During his April, 1975 visit to Tehran, Chinese Vice-Premier Li Hsien Nien expressed his support of Iran's policy for preserving Persian Gulf security, establishing a zone of peace in the Indian Ocean and a nuclear free zone in the Middle East. Mr. Li stated: "We appreciate and support these propositions and demands which we believe are in conformity with the desires of



Their Imperial Majesties' visit to Indonesia, September 1974



Their Imperial Majesties with President and Mrs. Tito



Their Imperial Majesties' visit to India, September 1974

the people of this area and the whole world."

Iran firmly believes that the Indian Ocean can be established as a zone of peace with the exclusion of superpower rivalry. However, In view of existing facts and realities, the accomploshment of this objective may not be feasible in the immediate future. This is the reason why the Shahanshah therefore decided not to oppose the establishment of Diego Garcia as a U.S. naval base as long as the naval presence of other powers continues. In this regard, His Imperial Majesty stated at a press con-

ference in Australia in September last year:

"I am not opposing the Diego Garcia base as long as there are other powers in the Indian Ocean. That would be silly. I have no positive figures, but some people say taht the Russians have 9,000 ship days presence in the Indian Ocean. (In that case) how could we tell the Americans to keep away? But we could ask both of them to keep away from the Indian Ocean simultaneously."

When a tacit agreement among the riparian states is reached, however, the Indian Ocean could well be established as a zone of peace and non-interference by outside powers.

Iranian Support for an Indian Ocean Conference

Iran supports the convening of a conference on the Indian Ocean with the participation of the littoral and hinterland States and that of the major maritime users of the Indian Ocean.

The general purpose of the conference should be to find realist- Iranian policy is aimed at this ic ways to advance the objectives of the "Declaration on the Indian Ocean as a Zone of Peace" of 1971 and subsequent resolutions of the

United Nations General Assembly, with a view toward final elimination of great power rivalry in the Indian Ocean.

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Iran considers that the best approach to achieve this objective is through collaboration among all littoral and hinterland states of the Indian Ocean to obviate the need for continued military presence of the outside powers.

Given the necessity for adequate preparatory work and the schedule of other major international conferences in 1976, the earliest possible date for the convening of the Conference would be 1977. The duration of the conference should be determined by the preparatory organ in the light of the agenda, but a period of 4 to 6 weeks would be appropriate.

Conclusions

The cornerstone of Iranian policy toward the Indian Ocean and Persian Gulf states is practical cooperation with the goal of promoting regional welfare and security. All riparian states would eventually be encouraged to participate as equal members in a regional agreement. Iran's motivation is simply to foster stability in the area and prevent the Indian Ocean from becoming the focus of the global power struggle. Indeed, cooperation at the regional level should be viewed as an integral part of the detente process which could hopefully serve as an example to other areas of the world and would lead to world-wide reconciliation. goal.

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ENVIRONMENTAL PROTECTION IN IRAN

The following is the second of our two-part series on environmental conservation in Iran, entitled "Wildlife and Nature Conservation." Part I, "The Physical Environment" appeared in our August issue of Profile on Iran.

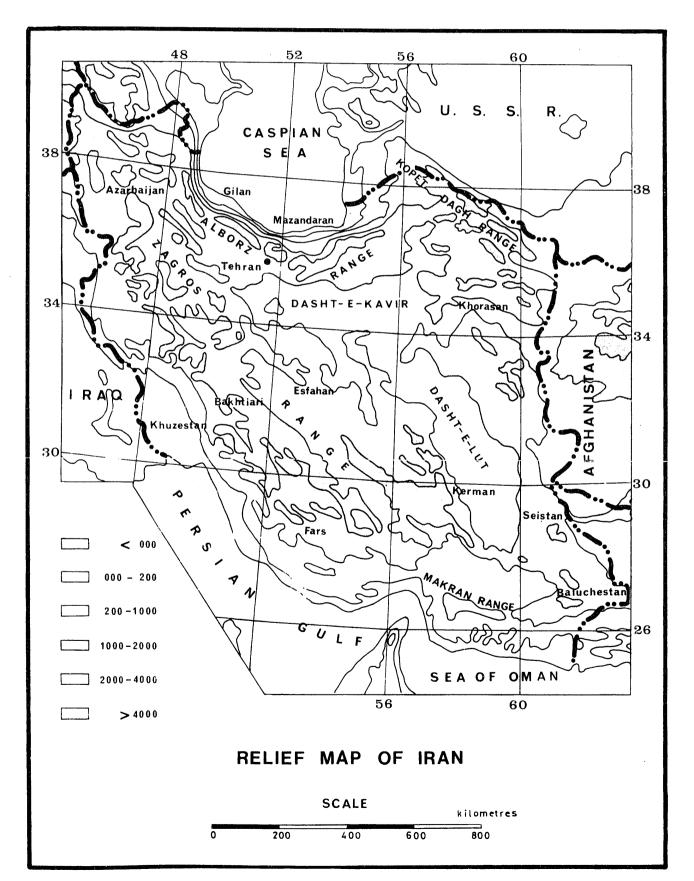
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Part II - Wildlife and Nature Conservation

It is clearly impossible for the Department of Environmental Conservation to undertake a comprehensive program of conservation and management in every region of fauna and flora importance; but there is no doubt that conservation regulations and the system of wardening have proved highly effective in virtually all such regions of Iran. The level of wildlife populations in most major areas are higher now than 20 years ago. Scientific investigations and the implementation of programs for the management of wildlife resources are the duty of the Department's Division of Parks and Wildlife. The Division undertakes studies and maintains records on such aspects of wildlife biology as distribution and abundance, productivity, behavior and food habits. Emphasis has been placed on wildlife research within the extensive system of National Parks and Protected Regions, as the undisturbed nature of these reserves permit basic studies of the various ecosystems in Iran.

Terrestrial Wildlife

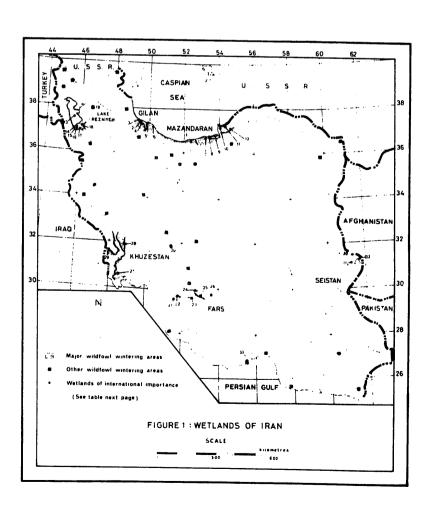
The Division has embarked on a management phase in a number of areas. Here, arrival of populations are being maintained at selected levels, habitats are being manipulated and various species are being trapped and translocated. To name a few amongst these, Touran Protected Region, the island of Kabudan and the Aju region are examples of areas where such management practices have been undertaken. The Touran Region in northeast Iran contains one of the highest populations of the Wild Ass in the world. The Wild Sheep population, the sole large grazing species on Kabudan island in Lake Rezaiyeh Protected Region, has occupied the Division's biologists for several years. To maintain both a healthy population as well as to establish an ecological balance, the Department has permitted hunting on a controlled basis and also decided in 1970 to introduce a suitable predator species. Two leopards, (a 1571b female and a 1811b male) were released on Kabudan. The last census produced a count of



1150, in contrast to just a few dozen sheep before protection was instituted 17 years ago.

In all protected regions, the condition of the vegetation is closely monitored so that imbalances in the food supply of wildlife populations are detected without undue delay. In the Aju area of the Central Alborz Protected Region, a pheasant habitat has been manipulated to provide a balance between food production and cover. It now supports a natural population of over two pheasants per hectare.

Raptor migrations, range seeding, small mammals and wildlife parasites are a few of the other projects which have been studied by the Division's staff. A most rewarding aspect of such programs of game conservation and a tangible measure of their success is that sizeable numbers of many species have been exported to half a dozen other countries where such species as wildsheep, gazelles, ibex, Cheetah and Wild Ass have been depleted or where Iranian varieties were to be introduced. Iran, thus constitutes a wildlife reservoir for



many countries and is pleased to provide this service as an example of international good will in the cause of conservation.

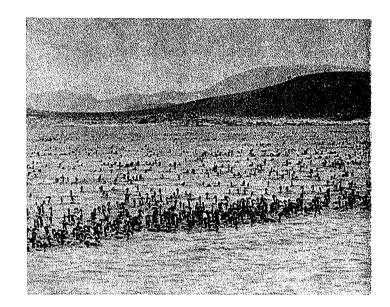
Wetlands and Waterfowl

Wetlands must not only be prized as the mecca for valuable waterfowl, but also for the sport and recreation which they provide. Unfortunately, owing to the severe seasonal fluctuations of these wetlands they are prey to man's diverse schemes, all too often implemented without regard to environmental consequences.

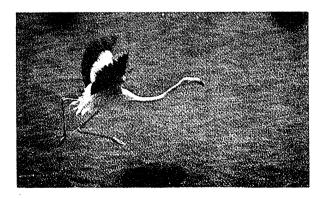
Iran is fortunate in having some of the finest wetlands in southwest Asia, and is justifiably proud of its utilization and conservation activities in this field. Substantial efforts have been made in the reconnaissance and classification of the wetlands and in the accumulation of data on water fowl. During the past six years, over one million hectares of the most important wetlands have been designated Protected Regions in all of the major geographical areas of Iran, comprising Gilan, Mazandaran, Gorgan, Lake Rezaiyeh, Fars, Seistan and Khuzestan. During these years the Department's censusing has become more refined. The midwinter census of January 1973 produced a count of nearly 2,900,000 birds. Similarly the winging program has been successful: by the end of 1973 some 7,575 birds had been winged and 509 recoveries recorded.

Endangered Species

Priority in research and management has been assigned to those species classified as "protected" in accordance with the wildlife regulations.

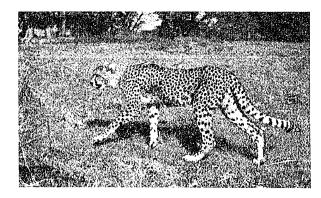


Thousands of young Greater Flamingo occupy waters between Kabudan and Espeer Islands, Lake Rezaiyeh



The Greater Flaming

Of the animals in this category, only the Caspian Tiger is genuinely endangered and perhaps on the verge of extinction. A number of other species, such as the two species of gazelle and Onager, once also endangered, are now thriving in many parts of the country. The Asiatic Black Bear, often talked about and reported by villagers and hunters in south eastern Iran, had not been sighted in some 70 years. Now there is a live Black Bear in Tehran, cap-' tured as a cub in the mountains of Kerman. However, proper investigations must be made about the status of this interesting animal. Action has been taken by the Department to assure the survival of rare and endangered animals such as the Persian Fallow Deer, Cheetah, Crocodile, Great Bustard, Caucasian Black Grouse and Caspian Salmon.



Cheetahs, unlike tigers, do not thrive in captivity. The endangered Asiatic species is on its way to recovery in Iran

Protected Areas

As in many other countries, the original impetus for conservation in Iran came from a select group of sportsmen. They recognized the need for reserves in order to prevent the decimation or extinction of various game species. They also saw that such reserves would regulate man as a predator on wildlife populations, protect endangered species and also maintain large populations of animals with commercial or recreational value.

These values were recognized chiefly in relation to the maintenance of a healthy habitat for wildlife, although the pristine beauty of many areas made it readily apparent that the protection of flora and, indeed, ecosystems, was equally important. Only when the system of reserves had become a reality, was it understood that the preservation of natural biota was an objective of immense national importance.

In the Protected Regions, where a level of exploitation consonant with the wise use of natural resources is permitted, it has become readily apparent that joint efforts by the Minister of Agriculture and Natural Resources and the Department of the Environment (to regulate the grazing of livestock on natural range) will be far more productive than any previous system. Moreover, it is now recognized that one of the significant uses of the reserves is to provide parameters of phytosociology and plant production for proper management of the remaining rangelands and studies of the synecology of the country's biota.

The tremendous potential of these protected areas for tourism and recreation is now also receiving recognition and it has received budgetary allocations during the course of the current Fifth Five-Year Development Plan to tap this great potential.

This aspect merits special attention, for it has received almost no publicity. Both in the international community and in Iran, very little is known of the diversity of Iran's biota and the magnitude of her system of reserves. The "Wildlife Parks" of the Game and Fish Act are renamed National Parks in accordance with the new Environmental Protection Law. The "Protected Regions" have been retained in the new Law, and two new categories of protected areas, "National Nature Monuments" and "Wildlife Refuges" have been added. With the implementation of the Environmental Protection Law. many of the present Protected

Regions will be reclassified in keeping with the new nomenclature. Several of these will achieve National Park status, as they are already so administered.

At present there are eight National Parks, forty-six protected regions and fifteen protected rivers in Iran, representing nearly every major habitat to be found in the country. The total area encompassed by these protected areas is approximately 7.6 million hectares (about 19 million acres). The major part of the task of creating these reserves was achieved in the short period since the creation of the erstwhile Game and Fish Department in 1967.

The following description of representative reserves illustrates the wide variety of habitats and wealth of wildlife contained within Iran's National Parks and Protected Regions.



The northern slopes of the Alborz Range, as here in the Parvar Protected Region, are covered with a luxuriant deciduous forest.

This was the first area to be designated as a national reserve and is located about midway between Gonbad Ghaboos and Bojnoord in northeast Iran. The park is uniquely situated in mountainous terrain, spanning bunch-grass Artemisia steppe, the eastern edge of the contigious Caspian Forest and the transition zone between these two communities. It provides abundant wildlife such as one would expect to find in mountains, foothills and valleys with steppe and deciduous forest vegetation.

The trans-Asian Highway delineates the southern boundary for some 12 miles and then winds north and west through the Park. Apart from the Department facilities this highway is the only intrusion on the magnificent reserve, and an understanding has been reached with the Plan and Budget Organization and the Ministry of Roads to relocate this highway out of the Park at the beginning of the Sixth Five-Year Development Plan (1978).

The mountains in the Western portion of the Park are covered with a climax forest of Tertian origin, to which the Caspian climate has imparted a special luxuriance. These forests stretch from the lowest (1,240 ft) to the highest (7,880 ft) elevation within the Mohammad Reza Shah Park. Much of the habitat is virtually untouched and, depending on edaphic and climatic factors, there are areas of impenetrable undergrowth

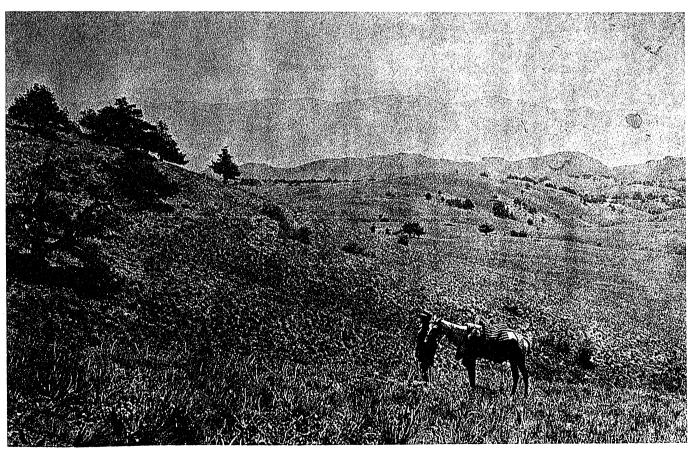
or pristine copses of enormous trees. A cursory dendrochronological analysis has revealed that there are zelkaras, oaks and maples between 450 and 500 years old and over 290 feet high.

Forest wildlife is abundant. Wild boar are seen in herds of over fifty; and Maral or Red Deer and Roe Deer can be observed as they graze and roam in the forest or in adjoining fields and meadows. Pheasants, Wood Pigeon, Quail and Woodcock are plentiful. To date 150 species of birds have been recorded in this

The Caspian influence dwindles as one moves east, and the forest gives way to scrub and then to bush steppe vegetation, where mixed grasses, open stands of juniper and copses of scrub maples are notable. This mountain steppe supports large numbers of Urial Sheep and herds of up to 500 are often seen. To the sportsman, it may be of interest to note that rams with 40 inch horns are seen regularly and heads of over 44 inches have been observed. Persian Ibex inhabit the cliffs and steep dissected ridges in both steppe and forest zones. Herds of Goitered Gazelles can be seen daily on the plain in the southeastern corner of the Park. The abundance of these species sustains a relatively large number of predators, such as the Leopard, Jungle Cat, Jackal, Red Fox, Brown Bear and Stone Marten. Coveys of Chukar and See-see partridges are common in the eastern part of the Park and Sandgrouse are often seen in the plains. The lucky bird-watcher can view simultaneously four of the five species of vultures found in Iran; namely the Black, Griffon, Egyptian, and Bearded; and if he is patient he can find nine species of eagle: the Golden, Imperial, Spotted, Bouelli's, Short-toed Steppe, Booted, White-tailed and Lesser spotted.

The Caspian Snowcock occupies the higher elevations of the Ghorkod Protected Region adjoining the Park to the east. The unique biological character and undisturbed condition of the Mohammad Reza Shah National Park lend an international significance to it as a reserve. Indeed, Iran is tempted to claim that there are perhaps no other areas of comparable magnificence in the Palaearctic world!





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Typical landscape in the eastern parts of Mohammad Reza Shah National Park.

Lake Rezaiyeh

Lake Rezaiyeh, located in northwestern Iran, comprises the largest inland body of water in the country. It has an average depth of 16 feet, is extremely saline and thus contains no fish but supports rich batches of brine shrimps and growth of algae. These provide abundant food for large numbers of waterfowl, notably Greater Flamingoes and Common Shelducks, which breed in the region. A large colony of White Pelicans also breeds in the Protected Region. They fly to fresh water lakes and rivers outside the reserve to feed on fish. Ruddy shelducks are common around the lake shore. During the migration seasons a wide variety of wildfowl and shorebirds occur in abundance. One hundred and eighty-six species of birds have been recorded in this Protected Region.

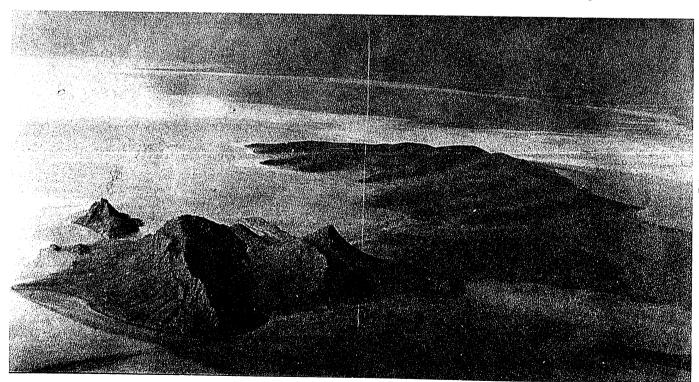
The lake includes 56 mostly small, uninhabited islands

which provide breeding places for the species named as well as a highly scenic setting for the lake. The largest island, Kabudan, consists of 3,125 hectares of hilly terrain covered with steppe vegetation and supports the population of Western Red Sheep previously mentioned as well as more Chukar partridge per hectare than any other reserve in Iran.

Kavir and Mooteh

These Protected Regions provide good examples of desert and arid steppe terrain, typical of perhaps half of Iran's land surface. The regeneration of plant and animal life as a result of conservation measures in both regions provides a contrast to the destruction wrought on nature in the areas surrounding these Protected Regions.

The Kavir Reserve is located near the northwestern corner of Iran's vast and arid central basins between the Dasht-e-



A view of the Kavi

Kavir (Salt Deserts) and the Daryacheh Namak (Salt Lake). A chain of low rocky mountains extending northwest and southeast and adjacent alluvial plains form the backbone of this region. Altitudes range from 2,290 ft to 3,270 ft on the plains and to 6,589 ft at the top of Siah-Kuh, the main mountain range. Vegetation is sparse and large areas appear to be barren during periods of prolonged drought. The more resistant shrubs and perennial herbs are confined to wadis or other drainage systems. However, sufficient winter rains and snow will trigger a profuse growth, transforming what seemed to be desert into a spring carpet of herbaceous plants.

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Where sufficient food and tranquillity are at hand, the non-forested mountains in Iran, from the Alborz in the North to the ranges within sight of the Persian Gulf, harbor wild sheep, Persian ibex, red fox, hare and chukar partridge. In addition, large predators, such as Leopard and Wolf, are also found. Although the Kavir Reserve contains all these species, it is managed primarily to conserve rarer plain species, notably the Onager, both species of Iranian Gazelles, Cheetah and Houbara Bustard. Sightings of these animals within 90 miles of Tehran together with the resurgence of plant life give hope that some day the area will be a showcase of a living desert.

The Mooteh Protected Region located north west of Isfahan, with its greater precipitation and better soil conditions is more steppe-like in character than the Kavir. Here Artemisia plains are surrounded by uninterrupted chains of mountains and provide habitats of considerable ecological in-

terest. Plains species such as the Onager and the Tebeer Gazelle do not occur in Mooteh but other species of wildlife cited for the Kavir are found here.

As with several other Protected Regions, Mooteh too suffers from excessive grazing by domestic livestock in certain areas of the reserve. A range management program, prepared jointly by the Forest and Range Organization and the Department, has been implemented for reduced and rotational grazing to provide a proper ecological balance.

This program will also result in arresting the sheet erosion which has been most damaging to mountain slopes in a number of areas in this reserve.

The above-mentioned abuse of the range combined with a prolonged drought has also been instrumental in the reduction of the very high population of the Goitered Gazelles in the Mooteh plains. Numbers were in the order of 7,600 in the autumn of 1971. It was estimated recently that the population has been reduced by as much as 40 percent.

Babu Kalat

This reserve is located in the province of Baluchestan in the extreme southeast corner of Iran along the Pakistani border. The Babu Kalat Protected Region is comprised of arid mountain and semidesert habitat straddling the Sarbaz River. The area provides a refuge for the Marsh Crocodile which inhabits the river proper and which would have been exterminated but for the timely protective measures applied by the former Game and Fish Department.

Protection of the surrounding terrain serves to preserve a representative portion of the Baluchi flora as well as the fauna associated with it. The latter includes the Gazelle, Indian Gray Mongoose, Northern Palm Squirrel, Houbara Bustard, Black Partridge and Desert Monitor, as well as many bird species typical of the air fauna of the Indian subcontinent. One hundred and sixty-five species of birds have been recorded in this reserve.

The Gulf of Oman coastline which forms the southern boundary of this region is a key waterfowl area in winter and provides important spawning grounds for the Green Sea Turtle.

The Arjan International Reserve

During a post conference field trip following the Ramsar International Conference in March 1972, a number of delegates were particularly impressed by the diversity and scenic beauty of the Parishan Lake Dasht-e-Arjan complex in the province of Fars. Their Iranian colleagues were equally enthusiastic in proposing this area as the best qualified for selection, which, in turn, resulted in the approval of this area by His Imperial Majesty.

Funds were first allocated in 1972 to undertake the necessary surveys. But in view of the size of the task and in view of the complexities of assessing the holdings of a number of villages within strategic parts of the area, the bulk of the budget required to purchase such land is being allocated during the current year. This aspect of the program is being implemented by the Ministry of Cooperatives and Rural Development.

Although the various ecosystems of this reserve have suffered much damage, particularly during the past generation, potentially its ecological diversity is even greater and more interesting than the superb region of the Mohammad Reza Shah National Park. However, it will take perhaps 15 to 20 years before an approximation of this potential is realized.

The area of the reserve is nearly 191,000 hectares and it is located some 40 miles west of Shiraz and just west of Kazeroun, straddling the main highway leading westward from Shiraz.

The physiography, fauna, flora and hydrography of the Arjan reserve are of tremendous interest. Oligomiocene limestones form escarpments of dramatic scenic impact. These are generally in paralleled ridges with enclosed valleys still dotted with oak trees which, in association with the surrounding grassland, create a savannah-like landscape. Despite years of destruction, a fair proportion of the mountain area is still covered with forests of oak, while the lower slopes are partially covered with steppic forests of almonds, hawthorn, hackberry, etc. In much of the area the shrub-like "Arjan" tree with its beautiful pink spring flowers can be seen. Halophytic vegetation, consisting particularly of various chenopods, is predominant around Lake Parishan, while the basin of the Arjan Lake has been severely denuded outside the marsh area.

The Arjan lake is exceptional in Fars because it is composed of fresh water, which is due to the waters being drained from the lake by swallow holes at the southeast corner of the basin. It is this phenomenon

also, which results in the dessication of the lake in summer time. The maximum size of the lake is quite variable, reaching perhaps 2,400 hectares after a wet winter though only several hundred hectares in a year of drought. Parishan is saline, the salinity varying

with the size of the lake. It is estimated that its maximum extent reaches about 4,200 hectares, and there are no records of the lake ever being dry. Such fish as Gambresia and Varicorhinus inhabit the waters of Lake Parishan.

The big game population of the Arjan reserve has suffered severely in the past due to excessive grazing, indiscriminate hunting, cutting and burning. Nevertheless, wild sheep, ibex, bears, wild boar leopard and wolf and indeed all the mountain species already alluded to for the Iranian plateau, occur in varying degree in the Arjan International Reserve. Altogether, including bats and rodents, 44 species of mammals have been recorded in this reserve. Two species, however, have become extinct. One is the Persian Fallow Deer, which no doubt occupied this area, although there are no available records of sightings in the extant literature. The other is the Persian lion, which was observed several times in Dasht-e-Arjan region in the pre-World War II period.

The protection and rehabilitation of several areas in this reserve, primarily the Arjan plain and the Barm valley, are suitable for the reintroduction of the lion, the national emblem of Iran. This project will be accomplished with the cooperation of the Indian government, for the surviving

population of Persian lion is found only in the Gir Reserve in western India. With its diversity of habitats and altitudinal variation, the avifauna of the Arjan International Reserve provides a rich ornithological spectacle.

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About 255 species of birds have been recorded for this area at this time. Pride of place must go to the waterfowl which breed and/or spend the winter in the basins of the two lakes. These include both the Dalmation and White Pelicans, Spoonbill, Glosse, Ibis, Flamingo, the rare White-head Duck and Marbled Teal, Ruff, Crane and a host of other ducks and waterfowl. In the winter of 1973 almost 70,000 wildfowl were counted on the Arjan marsh and just under 180,000 on Parishan.

International Activities

"The environmental crisis which has brought us together does not ring with the drama of historic events. For it is not a conflict which pits men against men, or nations. But man's abuse and desecration of nature may be as cataclysmic as a geological upheaval of many millenia foreshortened into half a century. Indeed, today even peace between men and nations can no longer have meaning for humanity unless man lives in peace with his environment. In this we must surely be united, for we all live on one earth.

H.I.H. Prince Abdol Reza Pahlavi, Head of the Iranian Delegation at the Stockholm Conference on Human Environment. June 6, 1972.

The words of His Imperial Highness Prince Abdol Reza indicate Iran's genuine interest in promoting international and regional activi-

ties in conservation and environmental protection. Iran's involvement in the 27-nation Preparatory Committee, the Intergovernmental Working Groups and a host of other meetings helped make the Stockholm Conference on Human Environment a meaningful and successful gathering.

Apart from fruitful efforts in moving towards the creation of a strong and independent body for the management within the framework of the United Nations to ensure the decceleration of national and international environmental pollution, H.I.H. Prince Abdol Reza announced the desire of His Imperial Majesty to institute an international prize to be awarded annually. This prize

would be awarded by the Pahlavi Foundation each year for the most outstanding contribution to the cause of the environment. Selection would be made by an international jury. To promote international awareness on how to deal with growing environmental problems, early in 1971 Iran hosted the International Conference on Wetlands and Waterfowl at Ramsar. The resultant Ramsar Convention was the culmination of some ten years of international effort. It was on this occasion that His Imperial Majesty advanced the proposal that Iran was prepared to place one of the country's ecosystems of global importance in joint trust with a suitable international agency to "conserve and administer



Ibex in Bakhtegan Protected Region

for all mankind." (See section
on Arjan International Reserve).

In 1973, the United Nations Environment Program (UNEP) approved joint projects in arid lands ecology and dedesertisation; waste-water reuse; habitat management for pest and vector control. In collaboration with the Department of the Environment in Iran, UNEP is also organizing a regional meeting on priorities in arid lands research and dedesertisation. A second forum will examine the Department's policy in the training of environmental field personnel to be convened in Tehran.

The Department has had a fruitful association with the International Union for the Conservation of Nature and Natural Resources (IUCN), of which it is a member. IUCN was one of the active sponsors of the Ramsar Conference along with the International Waterfowl Research Bureau. With support from UNEP and the government of Iran, IUCN sponsored a conference on ecological principles in October of 1974 in northeastern Iran, as well as a meeting on Marine Parks as Baseline Research Stations in Bandar Abbas.

In April of 1974, the Department hosted a meeting of the General Assembly of the International Council for Game and Wildlife conservation in Tehran. The Department of the Environment has also begun to participate in UNESCO's Man and the Biosphere Program. Of particular interest to Iran is the project on the Conservation of Natural Areas and of the Genetic Material.

Cooperative programs are now being discussed with both the U.N. Food and Agriculture

Organization and the World Health Organization. A number of other international organizations, both governmental and non-governmental, have close ties with the Department and assist in many aspects of its work. These include the Scientific Committee on Problems of the Environment(SCOPE) of the International Council of Scientific Union (ICSU), the World Wildlife Fund (WWF), the International Waterfowl Research Bureau (IWRB), the International Council for Bird Preservation (ICBP) and the Intergovernmental Maritime Consultative Organization (TMCO).

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The government of Iran is also keenly interested in bilateral arrangements for environmental protection. The Department was instrumental in June, 1973 in signing an agreement with the Soviet Union for the preservation of pollution in the Caspian Sea. In accordance with the provisions of this agreement, a joint Permanent Working Group has been formed, which is slated to meet at least twice a year to coordinate both action and research in this field. The above list is to demonstrate Iran's untiring involvement on an international level and in closing, it is most fitting to quote H.I.H. Prince Abdol Reza, who described H.I.M. the Shahanshah's objectivities at Stockholm:

"And as we have repeatedly affirmed our strong desire to live in harmony with all the nations of the world, so we now declare that we will with all nations, in every way we can, to alleviate the environmental problems which beset us, to protect man and his biosphere."

HIS IMPERIAL MAJESTY'S SPEECH AT THE OPENING OF PARLIAMENT



In the name of God, the Almighty, we take great pleasure in inaugurating the seventh session of the Senate and the twenty-fourth legislative session of the Majlis.

In the four years since the inauguration of the twenty-third Majlis, our country has been through a period, materially and spiritually, in the political, social, economic, educational and other fields, whose enduring achievements, in importance and quality, have been perhaps unequalled in the annals of Iran's history.

This era began with observance of the greatest national celebration in Iranian history the 25th centennial of the founding of the Iranian

Monarchy. It constituted an auspicious beginning for all the successes achieved during this period in our society, through a spirit of patriotism, national unity and deeprooted links between the Shah and the nation, which have always historically guaranteed the continuity and territorial integrity of our nation.

In this period, our country, relying on the principles of the revolution of the Shah and the People in domestic affairs, and pursuing its independent national policy in foreign affairs, daily took firmer and wider strides on the road of progress, towards welfare, progress, honor and greatness and Iran's standing on the world's stage rose continuously.

The vast increase in our national income, whose greatest part resulted from our just and successful struggle to secure our full national rights over our country's oil industry and resources, permitted us to implement material and cultural programmes in all spheres of national life on a scale unimaginable even a few years ago. Our annual revenues from oil and gas which in 1350 (1971) were \$2,036 million will this year total an estimated \$21,970 million. Our National Iranian Oil Company is today the third largest oil company and the ninth largest company in the world.

The budget for our Fifth
Development Plan was the largest in the entire history of
Iran. But before this fiveyear period was over, the Plan
was revised and the original
\$36 billion figure was increased to nearly \$69 billion, covering both private sector and
public sector investment.

The rate of growth in our GNP continues to be, as it has been over the last few years, the highest in the world. The per capita income of Iranians, which at the beginning of the Fifth Plan stood at \$565 reached a level of \$1,336 in 1353 (1974). It is anticipated that by the end of the Plan, in 1356 (1977), it will rise to \$2,069 at fixed prices. In the last two years our country gave significant financial assistance not only to several developing countries but also to the world's greatest industrial states; or we made heavy investments in the industries of these nations. It is obvious that we must make the optimum reasonable use of our oil wealth in developing the country, for this is not a resource that

will continue without end. Thus, through the full exercise of thrift, this income must be allocated to development affairs.

Given the limited nature of oil resources, and in keeping with our usual approach of remaining always a few steps ahead of events, we have already begun an extensive effort to secure new sources of energy for the country, particularly through the peaceful uses of atomic energy.

I also think it necessary to underline once again a point I have made at various times in the past both at home and abroad: the revision of former oil prices undertaken by the oil exporting countries was and is a fully logical and just step, and is directly linked to the disorder in the economies of the industrial world.

The end of the age of colonialism, the emergence of independent new countries among the community of nations, and the efforts of these countries for development and progress has naturally created new conditions. These developments logically necessitate a basic and far-reaching reform in the world economic order.

The earlier the big industrial countries grow aware of this undeniable reality, and adapt themselves to it, not only will this work to the benefit of the developing countries, but to the benefit of the industrial states as well.

Inflation in the industrial world, which in the last two years was between 12 and 15 per cent, and even reached 27 per cent, will naturally produce a reaction among the

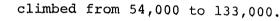
countries to which this inflation is exported. These
reactions cannot be prevented
by, so to speak, "gunboat
diplomacy," whose age has
passed. It is, rather, necessary to resolve this world
problem by negotiation, mutual
understanding and realism.

This is the solution we have always desired and supported and shall continue to support, as the only logical and reasonable solution; and it is obvious that we will under no conditions relinquish our just and legal rights.

During the twenty-third legislative session, one of the most important efforts undertaken in our country was directed at the qualitative and quantitative improvement

of our educational system. For this is a question vitally linked to the fate of future Iranian society.

In this period, the number of the nation's school-goers increased from 5 million to 7.7 million. The number of students at universities and institutes of higher education increased from 75,000 to 149,000. The number of schools in the country rose from almost 33,000 in 1350 (1971) to more than 43,000 in 1353 (1974). The number of universities rose from eight in 1350 to 19 in the current year. Altogether the number of higher education institutions in this period increased from 113 to 184 and the number of students at technical and vocational schools



In the future, we shall strive completely to eradicate illiteracy from the country, and to give each person a place in various state and private institutions in keeping with his or her ability. We will also pay full attention to quality, to ensure that the certificate of graduation given to a person is a true reflection of his learning and knowledge. In both spheres, as you know, greater strides have been taken. Free education for all Iranian children, and the extensive review on means for improving education standards that takes place at the annual Ramsar educational conferences, and particularly that which took place at the conference which ended a few days ago, are among these programs.

All these efforts, it is obvious, are based on the principles of the Iranian social revolution, the Revolution of the Shah and the People. This revolution will never come to a standstill, it is continuously in the process of implementation and also of fulfilment. For this reason, every time it is felt necessary, new principles are added to it, just as recently the expansion of ownership in industrial and productive units and the sale of factory shares to all the people was announced as the 13th principle and the continuous fixing and stabilization of prices and the correct distribution of goods on the basis of equitable profits and preventing profiteering - which is in reality the exploitation of the consumer - was announced as the 14th principle of Iran's revolution. Both are among the most important of the principles of this revolution. In less than two months since the issuance of the Imperial decree on fighting profiteering, the retail price index throughout the country has dropped by five per cent. Compared to prices at the end of Esfand (mid-March), this index, rather than showing an increase stands at two per cent below the Esfand level.

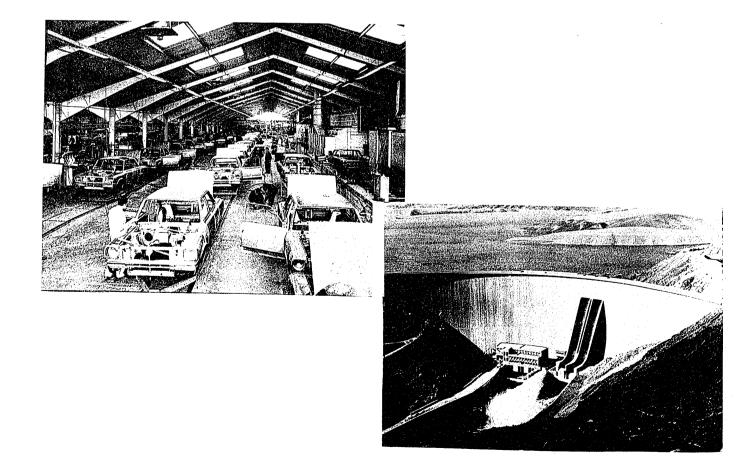
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Thus, not only has inflation been stopped, but the country, even while continuing its rapid economic growth, has also established a record in reducing inflation. This is without precedent in the world today.

In keeping with the meaning and the spirit of Iran's revolution, we will wage an unrelenting struggle not only against profiteering and shortselling, but also against all the other instances of dishonesty, including corruption, sloth, indifference and in general all those negative elements that are unacceptable to Iran's present progressive and forward-looking society; and we shall uproot them. In a society where social legislation is perhaps the most progressive in the world, the behavior and actions of every individual must be in keeping with these laws and any shortcoming in this area is of course unpardonable.

The basic responsibility for safeguarding the principles of the Revolution of the Shah and the People and implementing them in the most thorough manner possible lies today with a single party where all the abilities, forces and creative activities of Iranian individuals and classes are concentrated.

The Rastakhiz Party of the Iranian nation, which symbol-ises the oneness and unity of all the people of the country,



The representatives of this party, who have now come together in the two Houses of Parliament, carry a heavy responsibility along this road, both towards Iran's present society and towards the Iran of tomorrow, We feel certain they are fully aware of this.

One of the important aspects of the deep, social transformation of Iranian society, to which particular attention must be paid, is the elimination of all the undesirable traces and evidence of the periods of social and moral decline of the past. In her long history, our country has witnessed numerous foreign invasions, and also numerous temporary occupations by foreigners. Although each occupation ended with the moral and cultural victory of Iran, naturally each left behind its evil mementoes and traces, which were not in keeping with the true nature of the Iranian spirit and character.

Our country, determined in this new era of its existence, to put behind it all the traces of decline, weakness, corruption and helplessness of the past, also has the moral mission to cleanse the positive, eternal values of Iranian culture from all the impurities that may have found their way into this culture through foreign elements; and to by-pass everything that is not constructive, pure and strong and thus not worthy of Iranian culture.

The efforts of our youth to advance sports and physical prowess, whose highest symbol were their pride-inspiring victories in last year's Asian Games in Tehran, must be matched by their efforts for moral and spiritual strength and purity, so that the progressive Iranian society of today can satisfactorily fulfil its historic mission.

In the sphere of foreign policy, as already mentioned, our work will continue to be a basis for our independent national policy which has, up to now, produced for our country the optimum success possible on the world stage.

In the implementation of this policy, we have expanded friendly relations, cooperation and co-existence with all countries. We are pleased that the only dark spot which exists in this area, in our relations with our neighbor Iraq, has been eliminated.

The expansion of our relations with the countries of the vast region of the Indian Ocean: from Iran to Australia and New Zealand; and also with the countries of Africa and Latin America, which took place last year, provides new evidence of the implementation of our overall policy.

Based on our proposal, the United Nations at last year's session declared the Middle East a nuclear free zone. At the same time, our unalterable policy, that guarding the security of the Persian Gulf region is the responsibility of the states of this region alone, was made amply clear to all. We hold the same view in regard to the Indian Ocean, and we believe that this region must remain free of the interference and military rivalries

of the great powers.

Now, in inaugurating the seventh session of the Senate and the twenty-fourth session of the Majlis, I wish to express appreciation for the services of the representatives of the former session of Parliament, who in the fulfillment of their grave national duties always regarded a spirit of patriotism and

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responsibility as their guiding lights and cooperated fully with the Government in serving the national interest.

For the representatives who now begin to undertake this grave responsibility in an exceptional and important era in the history of Iran, I ask the Almighty God to grant the possibility of ever greater service to the Iranian nation.

SULTAN QABUS VISITS IRAN



The Sultan of Oman arrived on a private visit to Iran on September 1st and flew to Nowshahr where he was greeted by Their Imperial Majesties.

The two Heads of State dis-

cussed the situation in the Persian Gulf, the Gulf of Oman as well as technical and economic cooperation between the countries of Iran and Oman during the course of Sultan Qabus' brief visit to Iran.

EMPRESS FARAH PAHLAVI RECEIVES
SPECIAL HUMANISTIC AWARD OF THE
ASPEN INSTITUTE OF HUMANISTIC
STUDIES



The Shahbanou of Iran inaugurates Aspen Symposium in Persepolis

The Shahbanou of Iran was awarded on September 19th in Persepolis the Special Humanistic Award by Aspen Institute Chairman Robert Anderson and President Joseph Slater.

This award was given in recognition of Her Imperial Majesty's extensive commitment to social, cultural and humanistic development, personal demonstration of the contribution that dedicated sustained leadership can make in society, the Empress' services towards improving the quality' of life, the mobilisation of cultural traditions, the richness of providing the individual with identity as well as the capacity for creation and expression.

In her acceptance speech to

the Persepolis meet, Her Imperial Majesty said:

"I feel deeply honored to be the recipient of the special award of the Aspen Institute for Humanistic Studies, which I accept with the utmost pleasure. I would also wish to express my sincere joy at meeting you once again at the culmination of what I hope has been a successful symposium.

In thus honoring me with your award, I consider this a tribute to the Iranian people as a whole. For whatever this country has achieved during the past few years, is the fruit of dedicated and imaginative endeavors of our people as a whole, under enlightened leadership.

Your gathering at Persepolis bears testimony to growing
interest in international dialogue, aimed at achieving
deeper comprehension not only
of thoughts and ideas but also of hopes and common
endeavors. It is my hope that
the contents of the papers
presented here and the ensuing dialogue have served to
provide you with a more intimate knowledge of Iran today
and her prospects for the
future.

I would like to extend my warmest appreciation to the institute for its efforts in making this a creative gathering. Fortunately for all of us who inhabit what Buckminster Fuller called, "This Spaceship Earth," there exist organizations which concern themselves with the value content of research, of ideas, of those activities which ultimately aim to promote the quality of life.

During my brief visit to Aspen in early July of this year, I was very much impressed with both the content of the seminars and the setting in which they were conducted. I had the opportunity to attend the institutes annual meeting of the Board of Trustees and discuss many issues which I consider relevant to the plight of modern man. I realized how important it was for the active individual whether his activity be business, politics, science, medicine, etc. - to be able to break away from the socially conditioning and partially imprisoning routine of daily life in order to come to a place like Aspen, where the institute can help put him in touch with the social value of his work.

Too often we fail to question the roots and the ethics

of the businessman's urge for profits and the politician's quest for power. Medicine begins as a lofty pursuit in the tradition of Hipprocates and winds up as a commercial proposition. Even science, which has been heralded as man's savior in the 20th century, fails to instil in people the need to question the value of what they are doing. There are many other examples on which I shall not dwell. Yet, I want to emphasize that although we live in a world of specialization, with tremendous forces attempting to shape us into technocrats, it would be to the benefit of man and society to question the values which lie behind our behavior.

We must begin to rethink of ourselves as renaissance men and women, rather than technocrats blindly doing a job. To place the individual again in the center of things and to remind ourselves that the ultimate aim of human activity should be geared towards the achievement of a creative humanistic world free from material want. The Renaissance "man" may indeed be what we are all after. Otherwise, why bother to arrange for business managers to attend executive seminars which concentrate on Plato, Dostoevsky, Locke and Machiavelli, to name just a few. Wouldn't a series of lectures on business or economics be more appropriate?

As seen from our vantage point, we would say no. For we share the institute's desire to widen the horizons of man in the hope that he will recognize - more profoundly than the technocrat - the interdependence of social phenomena. In Iran, we are not oblivious to the chasm which exists between the Renaissance

"Man" and the technocrat, between overall knowledge and excessive specialisation. We are trying to achieve as rapidly as possible the goals of what His Imperial Majesty the Shahanshah has termed "The Great Civilization." While the process of the economic transition and social transformation towards that goal seems clear, some ambiguity surrounds the cultural and psychological elements of this civilisation.

Progress is not simply a quantitative economic phenomenon. It is above all a human process. Failure to work this significant factor into any calculus of development is an invitation to social and human catastrophe. Progress requires and creates new cultural values, norms and concepts while redefining the traditional ones.

In Iran, while we are proudly committed to our rich heritage and traditions, we shall not hesitate to create the environment conducive to achieving the human aspects of our aspired goals. This may well entail a new set of values under which a greater balance will be achieved between the spiritual needs of man. It is our hope in Iran that the end result of our unified approach to development will eliminate the alienation of man from man, of man from nature and of man from society. In our schemes for development and our aspirations for a new economic, social and political order, 'man' is the end and not simply the means. The cultural and sociopsychological changes that must - of necessity - accompany the economic transformation of our society, will hopefully be a synthesis of our traditions and the social requisites for modernization.

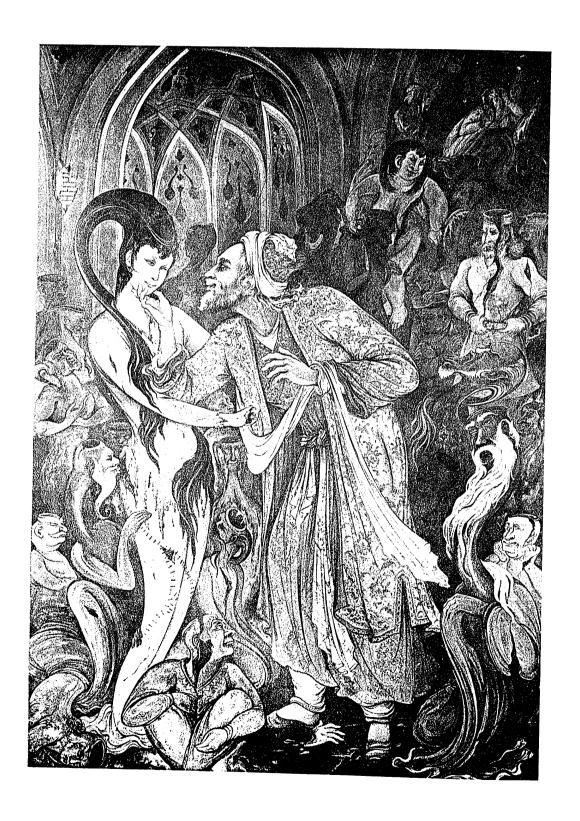
If the requirements of spec-

ialization have taken man away from the focal point of human endeavors, our hope is that through awareness, good leadership and good planning, we will reach the era that will restore the individual to his proper position. While the task is difficult and success is by no means guaranteed, we should not be dismayed. We must not forget that the spiritual balance which we wish can only be achieved after the attainment of a material balance whereby all individuals are able to satisfy their basic human needs. In the transition period to affluence rather sophisticated standards for the precise measurement of economic progress, in terms of its psychological, social and cultural effects need to be emphasized.

We are indeed in great need to develop humanitarian standards to measure the effect that any social program has on the psyche of man and the extent to which it contributes to his happiness or alienation. In the battle of standards, 'man' must prevail, and it my hope that all men and women of goodwill throughout the world will contribute their share to this endeavor.

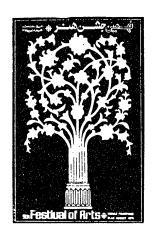








NINTH SHIRAZ INTERNATIONAL ARTS FESTIVAL



Shiraz, situated near the ancient city of Persepolis, was once again this year the scene of the Shiraz International Arts Festival. The Festival is now in its ninth year, having been initiated in 1967 the year in which the Art and Festival organization was established in order to promote the arts and cultural heritage of Iran and to expose those interested to renowned artists from all over the world representing a wide variety of artistic traditions and forms. The Shiraz Festival this year lasted a little more than a week, from Thursday August 21st through Saturday August 30th with a program of performances that varied from one day to the

The Festival is now internationally recognized as a culture and arts festival of quality and deserving of great acclaim. It annually attracts people from all over the world both as performers and as interested onlookers. In the Festival's earlier years the tone of performances tended to reflect a greater emphasis on the classics. However, forms reflecting the avant garde eventually gained a considerable representation among the Festival's performances. Thus, the Shiraz Festival is now also thought of as one of the world's leading avant garde festivals.

In organizing the program for the Shiraz Festival the aim is to promote both traditional and innovative forms from East and West and to give exposure to the culture of less well known forms. Naturally, Iranian artists themselves comprise a good portion of the entertainment program in order that



Shiraz Arts Festival

they may display their talents in a major event and present to foreign visitors a taste of Persian culture.

As is her custom every year as patron of the Shiraz Festival, Her Imperial Majesty the Shabanou of Iran was on hand to inaugurate the week's events. Following the inauguration of the Festival on Thursday evening the first item on the program was a performance by the Alwin Nikolais Dance Theatre Company of the United States. The setting for this opening evening was Persepolis and the illuminated ruins of the old Achaemenian city provided a beautiful background for the Nikolais Company performance. The group was very well received. After the performance the Empress graciously spoke with Nikolais and congratulated him and his

company personally and individually for their performance.

Sec. O.

Among those accompanying Empress Farah at the Festival were Her Imperial Highness Princess Shams, Her Majesty's youngest daughter Princess Leila, the Minister of Culture and Arts Mehrdad Pahlbod and the Minister of State for Plan and Budget Organization, Abdol Majid Majidi.

Empress Farah remained in Shiraz on Friday, the second day of the Festival. Her activities included opening exhibitions of ancient handicrafts from desert regions, and ancient Korans and Islamic relics. Her Majesty also visited the Shiraz Museum, a project she sponsored, and attended a play put on by Iraj Saghiri and his actors, all



Opening ceremony of Ninth Shiraz International Arts Festival

from Bushehr, a port city on the Persian Gulf. In the evening of this busy day Empress Farah saw another play, "Tonight is Moonlight", this one directed by Tehran director Babilla, and listened to a concert of traditional Persian music.

The program of entertainment for the week was an impressive one. The countries represented in Shiraz included the United States, Italy, Vietnam, Tunisia, Yugoslavia, Poland, Uganda, India, Japan and, naturally, Iran. The No Theatre of Japan, the Polish Radio National Symphony Orchestra, traditional music and songs of Vietnam, Tunisian religious music, the Nikolais Dance Theatre Company, songs of Naples performed by an Italian group, the Indian flute played by H. Chaurasia, and traditional Persian music were

all part of the week's entertainment, but by no means a complete list. The Festival offered more than just the many live performances of which the above list is a sample. Films were shown, both Iranian and foreign, exhibitions of Iranian handicrafts, Persian carpets, traditional paintings and other examples of Iranian culture were to be found throughout the duration of the Festival.

The play "Qalandar Khuneh", directed by Iraj Saghiri and performed by his group of twenty actors from Bushehr, was a play that depicted day to day life in the port city home of its actors. In his play Saghiri succeeded in presenting an authentic and sensitive scene of the traditions and life in his native province. On the

other hand, Assurbanipal Babilla's drama "Tonight is Moonlight" was an attempt at the
avant garde in modern Iranian
theatre the overriding theme
of which was iconoclastic. Both
plays were well received and
served as an example of how the
traditional and the modern
coexist as equally respected
and effective art forms.

The Polish Radio National Symphony Orchestra, recognized as the best in Poland, gave two splendid performances. The first show featured conductor Krysztof Penderecki conducting selections of his own works. This performance was impressive and at the same time surprising due to Penderecki's unique manner and his handling of the orchestra. The audience supplied him with warm applause and appreciation. Jerzy Maksymiuk conducted the Orchestra's second performance of works by Rayel, Lutoslowski and other Polish composers.

The contribution of the Ugandan theatre and dance group directed by Robert Serumaga called "Renga Moi" is a play based on folklore of Uganda concerning rites to be performed after the birth of twins, another example of a traditional art form as chosen to represent a contributing country.

The leading oriental musicologist Tran Van Khe gave a lecture demonstration on Asian musical traditions and demonstrated a vast knowledge of instruments and their history. He stressed in his most interesting demonstration the importance of preserving musical tradition in the East and West and of understanding its contribution to one's heritage.

In the Indian "Odissi Dance" presentation, an act which consisted of a seven-part dance

to the accompaniment of the flutist H. Chaurasia, themes basic to Indian thought were depicted in symbolic dances. Chaurasia was acclaimed as the star of this act as he very successfully portrayed as flutist the most important element of life in the dance, breath.

Mr. Com

The opening-night performance of modern dance by Alwin Niko-lais' company drew the great credit it deserved. Perfection in movement was accomplished through rigorous discipline on the part of the dancers under the expert tutelage of Nikolais. The masked and chalked performers danced to electronic music and the complicated lighting provided the final touch to the choreography making the production a fine example of its genre.

The Shiraz International Arts Festival has proven itself to be a tool of major importance in promoting international cultural exchange. It offers an opportunity for the great and the less well known in various artistic fields and from many cultural backgrounds to contribute jointly to an educational, entertaining and culturally inspiring venture. Under the patronage and direction of Her Imperial Majesty the Shiraz International Arts Festival has become one of the foremost cultural events of every year and has provided Iranian artists with an invaluable opportunity to display their talents, demonstrate their folklore and present their rich heritage to an international audience. It has also served as an increasingly important instrument in the exchange of cultural and artistic understanding among various peoples and countries of the world.

A scene from "Galandar Khuneh



Modern dance by Alwin Nikolais

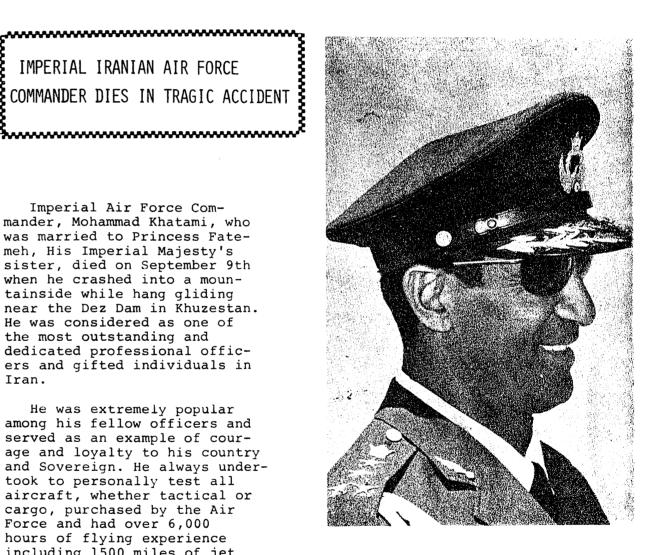
IMPERIAL IRANIAN AIR FORCE COMMANDER DIES IN TRAGIC ACCIDENT

Imperial Air Force Commander, Mohammad Khatami, who was married to Princess Fatemeh, His Imperial Majesty's sister, died on September 9th when he crashed into a mountainside while hang gliding near the Dez Dam in Khuzestan. He was considered as one of the most outstanding and dedicated professional officers and gifted individuals in Iran.

He was extremely popular among his fellow officers and served as an example of courage and loyalty to his country and Sovereign. He always undertook to personally test all aircraft, whether tactical or cargo, purchased by the Air Force and had over 6,000 hours of flying experience including 1500 miles of jet flying. As Iran's top pilot, he possessed a vast knowledge of aeronautics.

Mohammad Khatami played a fundamental and vital role in building up Iran's Air Force and was an inspiration for the new breed of highly qualified airmen that Iran has trained in the last decade.

Mohammad Khatami's versatility was also demonstrated by his talented athletic abilities. He captained the National Soccer, Volleyball and Basketball teams for several years and was also a star



track and field athlete. He was also one of the best Iranian water and snow skiers, as well as an outstanding tennis player.

The tragic death of Mohammad Khatami has been a bereavement for all Iranians who came to love and respect him. He has left behind two children, Kambiz, 15 and Kamran, 13 from his marriage to H.I.M.'s youngest sister Princess Fatemeh and a daughter, Sabrineh, 21 from his first wife, who also perished in an accident.

PROFILE ON AUGUST, 1975

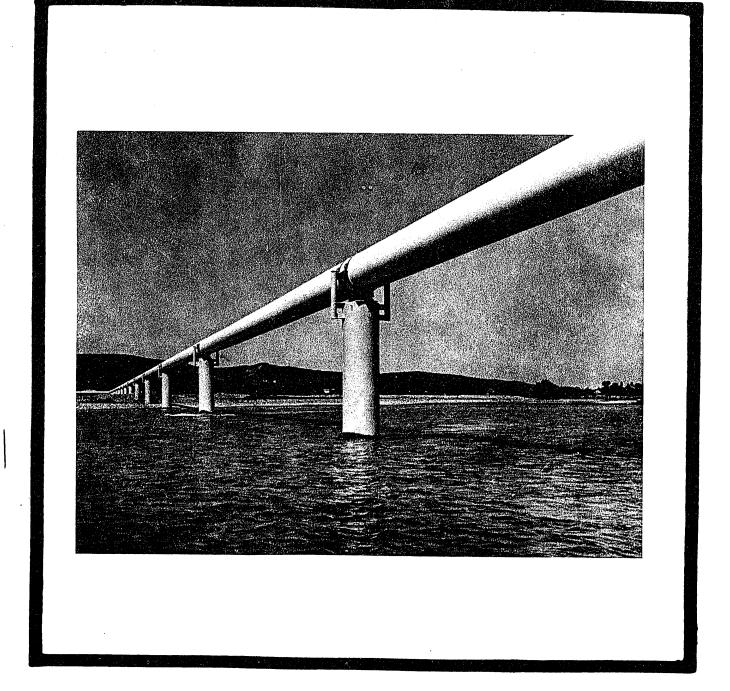


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ISSUED AND PRINTED BY
THE PRESS AND INFORMATION OFFICE

The last quarter of the twentieth century has begun and with it has come a new awareness by the economic planners of the world's economies that the cavalier attitudes they once held towards the earth's raw material resources are no longer tenable. The late 1960's and early 1970's have been times when populations have become increasingly aware of their environment and their fragile relationship towards it. This means more than just the familiar themes of clean air and water. Nations have become aware that the waste of resources can no longer continue at the rate which has existed in the past. The once limitless frontiers of the earth have seemingly been reached and nations are moving towards the reappraisal of resource use policy that had previously seemed natural and

While these frontiers appeared limitless, it was rational to assume that the resources should be converted to their final use by the most economic means available. The emphasis was put on the conversion of these resources into final goods. If much of the potential of the resources was lost in the conversion process, the cost seemed small in comparison to the cost that would be necessary for more efficient conversion processes. The economic reality of costs and trade-offs prevailed. However, the decisionmaking process did not take into account the possibility of the exhaustion of these raw material sources at some future date and thus the cost of rapid use of these sources and the cost of waste of these resources was either neglected or set too low.

If a particular source ran out, one could always move on to the next source, use it, discard it when it became advantageous to do so, and move on again. The frontiers had not yet been reached. The era of "the cowboy economy" prevailed.

The increased cost of petroleum has been the major factor for the demise of "the cowboy economy" mentality. The raw material which replaced coal after the end of World War I in importance for industrial and commercial uses because of its lower cost has now become more costly to use and waste. The industrial superstructures for which the low price of crude served as a foundation for development has found that it must now move towards more efficient conversion processes and also that other sources of energy must be found and more efficiently utilized. This restructuring of the price structure for energy has increased the attention of planners on the potential of natural gas as an important energy source.

Natural gas has remained a relatively small source of energy because of petroleum's importance. Previously, the low cost of petroleum had made it easier to simply flare off gas at the well head. The cost of recovery had been too great and petroleum was supplying the overwhelming proportion of the world's raw energy demand. Thus, natural gas was simply more easily disposed of than used. The end of the era of cheap crude has signaled a major effort at recovering this vital energy source.

The first recorded background use and discovery of natural gas was in China. There, wells of up to 2,000 feet were drilled in efforts to mine salt. The gas from these wells was transported



Their Imeprial Majesties the Shahanshah Aryamehr and Shahbanc Farah at inauguration ceremonies for Bid-Boland gas refinery

for use in bamboo pipes. It was also known in Japan at approximately the same period. In the west, it was known before the time of Caesar. There was a famous "fontaine ardente" (burning fountain) near Grenoble. Also, at an early date the city of Genoa was lighted by gas brought from the wells of Amuriamo in Parma. In Russia, on the oil rich Apsheron Peninsula at Surakhary near Baku on the Caspian Sea (which was part of Iran at the time) fire columns that were visible for many miles sprang from a naptha deposit. This was reported by Massoudi in 967 A.D. He also told of an island three days voyage from Baku, where a crater released fire columns as high as mountain summits amid terrible thundering. This awesome sight reportedly inspired

Zoroaster to his cult of flame worship and a temple devoted to this religion was built at Surakhary. The gases responsible for these fires were mostly from Miocene sandstones. Now, Surakhary is more important for production of oil than gas.

The same

The first natural gas industry was established in Fredonia, New York in 1821. Here, for the first time, a well was sunk for the express purpose of releasing trapped gas and using it commercially. A well 1½ inches in diameter and 27 feet deep was drilled. The gas from this well was said to be able to light thirty burners (light from one burner was regarded as being equal to that of two good candles). The industry produced gas for local consumption only.

-

One of the technical shortcomings of the day was the inability to manufacture absolutely tight joints for pipes.
(S.R. Dresser did not invent
couplings until around 1890).
The problem of safe transport
of gas is no longer of critical
importance as modern technology
has made gas leakage from pipelines a thing of the past.

The natural gas and petroleum deposits under the earth's surface today were, like all fossil fuels, created by the decomposition of plant and animal life that existed in the great oceans and seas that once covered most of our existant land masses. The remains of this life were deposited in the silt of the ocean floors and there combined with the salt water to form petroleum and natural gas deposits. As the earth continued its geological evolution, these deposits changed in nature. Natural gas and petroleum became trapped in various folds and faults within the earth. (Gas is important to those seeking to recover crude because of two factors. One, the gas is the force which very often lifts the crude out of the ground and up the well shaft. Where sufficient gas pressure is lacking, other material, such as water, is used to displace the crude. Second, the more gas is dissolved in the crude, the greater its fluidity and the greater is the ease in recovery.) The proximity of gas and crude lead to gas being classified in three basic categories:

- 1) Gas that has been trapped within the earth that is free, not in contact with or dissolved in crude oil, is referred to as non-associated gas.
- 2) Gas which is in immediate contact with but not dissolved in crude, is called associated gas.
 - 3) That gas which is found

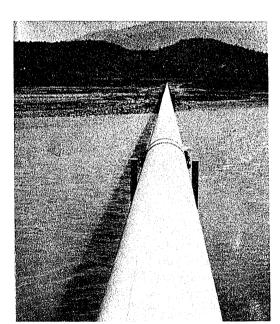
in solution with crude is called dissolved gas.

All three types of gas are counted when estimating the reserves of a nation.

Gas is also classified by its chemical components. Gas which contains commerciably recoverable liquids is called wet and that which does not is called dry. Wet gas contains propane, butane, pentane and gasoline components in significant amounts, significant in this instance meaning that these components can be recovered at the rate of more than 300 to 400 gallons per million cubic feet of gas. Gas which contains these recoverable elements in a smaller quantity is referred to as dry gas. Natural gas is made up of both types of gas. Methane and ethane which constitute 95 per cent of most natural gas do not contain significant amounts of these heavy hydrocarbons. Methane, which burns well and is both smokeless and sootless is most appealing in areas of heavy industrial concentration where smoke pollution is a problem. Ethane is the next most abundant component of natural gas followed by propane and butane. The latter two are referred to as Liquified Natural Gas (LNG) and are used for industrial and chemical purposes.

Finally, gas is categorized as to it sodor. Gas containing little or no sulfur is called sweet. Gas which contains objectionable amounts of sulfur, which makes it highly corrosive, is called sour. It is used in the manufacture of carbon black and is characterized by its strongly repulsive odor. That gas which is primarily used in the home is sweet.

Natural gas is used in four primary areas:



IGAT crossing Sefid Roud river

1) residential (such as home
heating, cooking, heating water,
refrigeration, clothes dryers,
incinerators and gas lighting)

المنتوزه والانصر

- 2) commercial (hotels, restaurants, laundries, bakeries)
- 3) industrial (to forge, cut, galvanize, dry, purify)
 - 4) Power generation.

Natural gas is used in the manufacture of steel, plastics, paints, tile, cement, glass, salt, chemicals, pipe, paper. Hydrocarbons are used in conjunction with other substances to form synthetic rubber, "miracle fiber," fertilizers, insecticides, medicines, explosives, detergents and solvents. Table 1 lists some of the chemicals which can be derived from natural gas and their use.

TABLE I

Natural Gas and Petrochemicals

Chemicals from Methane

Chemical

Major End Use

Ammonia

Fertilizer

Methyl Alchohol

Antifreeze and Raw Material for Formaldehyde (used in plas-

tics.)

Hydrogen Cyanide Acetylene Plastics and synthetic fibers, Welding, Vinyl Plastics and Neoprene Rubber

Rubi

Solvents and Refrigerants

Methyl Chloride, Methylene Dichloride, Chloroform and Carbon Tetrachloride

Carbon Black

Rubber Compounding

Η

NATURAL GAS IN IRAN

The oil fields in the south of Iran, produced in association with crude oil, billions of cubic feet of natural gas every day. Unfortunately, virtually all of it was flared and no contribution was received from this important source of energy to the economic development of the country. It was only after the Revolution of the Shah and the People in 1963 and the ensuing rapid economic development of the country that utilization of natural gas became a must and steps were taken to stop the wastage of this source of energy. To centralize the responsibilities, the National Iranian Gas Company (NIGC) was established in 1967. The fact that virtually all the gases produced in Iran in the past and present are associated gases resulting from crude production combined with market conditions in Iran and the world explains why this energy source has heretofore been flared rather than stored. The immediate demand for this commodity had not been adequate to justify the expenditures necessary to recover it. Had future demand requirements been able to be accurately projected, the countless millions of cubic feet of natural gas flared since the early 1900's might have been recovered. However, in the last few years Iran has pioneered the steps taken throughout the Middle East to utilize this valuable form of energy. In 1970, flaring in Iran as a whole was reduced to about 60 per cent, out of a total associated gas production of 2.8 billion cubic feet a day. The effective utilization of some 40 per cent is expected to be maintained this year, from a much

larger production of about 4.9 billion cfd, and by the 1980's it is hoped that nearly all the gas produced will be used in one form or another. The decision to put an end to the flaring of natural gas represents a realization by the National Iranian Oil Company (NIOC) and NIGC that as the Iranian oil fields mature and level off in production, the associated gas from these wells assumes a new importance as a source of both energy and income. Previously, 56% of total output. or about 3 billion cubic feet of natural gas had been flared. NIGC has substantially reduced and has begun instituting a major program to establish a natural gas industry. The four major parts of the program are:

- 1) A top priority project to re-inject vast quantities of gas (associated and non-associated) into the Khuzestan oil fields in the old consortium agreement area.
- 2) A plan to build up domestic consumption of natural gas in order to shift from oil as the chief source of Iranian energy.
- 3) A plan to build Iran into a major producer of petrochemicals.
- 4) A build-up in exports of natural gas, both in the gaseous and liquid states.

NIGC believes that Iran possesses the necessary gas reserves to meet the requirements of its program. In a speech delivered before the U.S. Gas Processors Association, NIGC's representative, Mr. M. Tavana, said that with 21.33% of the reserves, Iran is the richest gas country in the non-Communist world. He placed Iran's current proved reserves at 374 trillion cubic feet, of which 210 trillion cubic feet are in the old consortium area. (See Map VII).

In view of the incremental benefit that can be derived from oil as an exhaustible resource, and considering the demands of the world market, an end is now in sight to the almost continuous growth of oil production in Iran. Thus, energy developments in Iran are increasingly being centered on natural gas. Iran's proven oil reserves are still the second largest in the world, but her mostly untapped gas reserves are even higher. (See Tables II, III, IV

A major advantage to Iran is the existence of huge gas fields discovered in recent years whose non-associated gas potential is equal to that of its associated gas reserves.

Associated gas reserves in Iran include both gas dissolved in crude oil and that which exists in gascaps above oil-bearing reservoirs. The ratio of gas dissolved in oil averages about 700 cubic feet per barrel, giving reserves of some 39 trillion

TABLE II

TRILLION CUBIC FT 570.4 ESTIMATED PROVEN RESERVE

ESTIMATED PROVED WORLD RESERVES OF NATURAL GAS BY COUNTRY

· (1000)		
	COUNTRY	ESTIMATE (trillion cubic feet)
1	USSR	547
2	UNITED STATES	291
3	ALGERIA	130
4	THE NETHERLAND	82
5	SAUDI ARABIA	56
6	CANADA	54
7	KUWAIT	39
8	UNITED KINGDOM	35
9	VENEZUELA	26
10	PAKISTAN	25
11	LIBYA	24
12	IRAQ	19
B	AUSTRALIA	16
14	NIGERIA	15+
15	ABU DHABI	15
16	MEXICO	12
17	W. GER.	12
18	FRANCE	11
19	ARGENTINA	9

cubic feet in the Persian Gulf offshore joint-venture oilfields. Even larger reserves are contained in the gas-caps over some of the Khuzestan oilfields which can be produced independently of oil. An outstanding example is the Pazanun field, originally discovered by Anglo-Iranian (now BP) in 1935. This was thought for some years to be a gasfield and was thus not exploited. It was only as a result of drilling deeper in 1961 that it was shown to be an oilfield surmounted by a large gas-cap, containing nearly 50 trillion cubic feet of reserves. Total

gas-cap associated gas reserves are probably in the order of 90 trillion cubic feet. The following table represents the areas where proved and probable gas reserves exist in Iran. (Chart 4, Maps VI & VII).

Gas is assuming a major role in economic expansion, for domestic and industrial consumption as well as the manufacture of petrochemicals, with sizeable quantities available for export both by pipeline and in the form of liquified gas. According to the current revised Fifth Plan growth targets for oil and gas

TABLE III

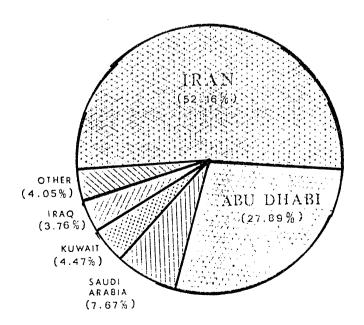
FIG. 1 ESTIMATED PROVEN WORLD NATURAL GAS RESERVES AS OF JANUARY 1, 1975

AREA	TRILLION FT	PERCENT
ASIA-PACIFIC EUROPE MIDDLE EAST AFRICA WESTERN HEMISPHERE TOTAL NON-COMMUNIST COMMUNIST COUNTRIES TOTAL WORLD	115 203 717 315 403 1,753 846 2,599	4.43 7.82 27.58 12.12 15.50 32.55 100.00
(270) W. Hemisp (18:50)	Commu (32.55	l l

TABLE IV

FIG. 2 - ESTIMATED PROVED MIDDLE EAST
NATURAL GAS RESERVES AS OF
JANUARY 1, 1975 - TRILLION
CUBIC FEET

COUNTRY	TRILLION FT	PERCENT
IRAN ABU DHABI SAUDI ARABIA KUWAIT IRAQ OTHER	374 200 55 32 27 29	52.16 27.89 7.67 4.47 3.76 4.05
TOTAL	717	100.00



are to be 51.5%. Priority is being given to gas re-injection schemes designed to achieve the maximum oil production from fields which are the oldest producers in the Middle East. These reinjection schemes are critical to a secondary recovery program for the former consortium oil fields which is being given top preference and first access to gas supplies. It aims to boost recovery of oil in place to 40% or more from only $20-\overline{3}0$ %. Current estimates indicate that there are 50-60 billion barrels of recoverable crude in the Khuzestan fields. This figure implies a near doubling of Iran' oil reserves through the reinjection program.

Fig. som

When it is in full swing, the injection plan will need about 13 billion cubic feet per day. of gas, both associated and nonassociated. In fact, it will absorb all associated gas now being produced (4.8 billion cfd in 1974). The rest must come from gas caps of selected oil fields and from non-associated gas fields, estimated at about 2.3 billion cfd. This means another 6-7 billion cfd of gas must be discovered by National Iranian Oil Co. (NIOC), its contractor Oil Service Co. of Iran (OSCO), and NIGC. They believe this is possible through an intensive search in known gasprone areas of the country. This is in addition to gas needed to fulfill Iran's export commitment to Russia, West Germany and at least two major LNG-export projects aimed at the U.S., Europe, and Japan. These call for eventual export of 7.5 billion cfd.

Initial studies covered seven of the larger fields - Agha Jari Ahwaz-Asmari, Marun, Gachsaran, Haft Kel, Bibi Hakimeh and Paris The first actual injection will take place at Haft Kel where 300 million cfd of gas from the gas cap of the Naft Safid will

1.

TABLE V

FIG. 3 - IRAN'S ESTIMATED PROVEN NATURAL GAS RESERVES COMPARED TO NON-COMMUNIST WORLD AND TOTAL WORLD AS OF JANUARY 1, 1975

A - NON-COMMUNIS	T WORLD	U.S.A.
COUNTRY IRAN U.S.A. ALGERIA ABU DHABI NETHERLANDS SAUDI ARABIA CANADA U.K. NIGERIA KUWAIT OTHER TOTAL	PERCENT 21.33 14.26 13.06 11.41 5.42 3.14 2.97 2.85 2.57 1.82 21.17 100.00	IRAN (21.33%) Aligeria (13.06%) Abu/ Dhabi (14.4%) (21.17%) Xay Saudi Arabia (3.14%) (2.85%) Canada (2.97%)
B- TOTAL WORLD IRAN COMMUNIST WORLD NON-COMMUNIST WORLD	14.39% 32.55% 53.06%	Non_Communist World (53.06%) Jian (14.39%) Communist World (32.55%)

TABLE VA

Iran's Natural Gas Production

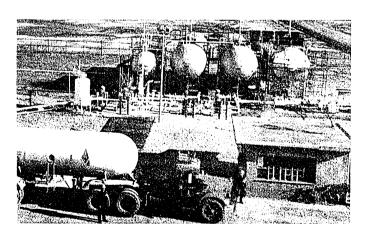
In Million Cu. Ft.

J. 53.

	1974			
Company	Oct.	Nov.	Dec.	
N.I.O.C.	394.9	416.8	444.0	
Khuzestan (South) Oil Fields	129,880.0	131,439.8	133,756.6	
IPAC	5,056.3	5,982.9	6,310.0	
SIRIP	1,135.9	1,173.4	1,227.6	
LAPCO	2,180.0	2,088.0	2,008.0	
IMINOCO	1,774.0	1,748.4	1,902.2	
TOTAL	140,421.1	142,849.3	145,648.4	

be delivered in 1975, to be augmented later with associated gas. By late 1976 injection should begin at Gachsaran and Agha Jari using dome and associated gas from the Pazanan field and associated gas from Gachsaran and Agha Jari themselves; and at the Paris field injection of some 300 million cfd of Naft Safid dome gas should begin in 1977. Beyond these, other fields will be added on as the supply of gas increases, and eventually fields producing as little as 30,000 b/d could be included in the program, depending on the individual engineering studies which will be required prior to injection. (See Map VI).

Iran is proceeding with its plan to convert industries and cities to gas consumers to discourage the wasteful consumption of fuel oil, kerosene, and diesel oil. This is in line with His Imperial Majesty the Shahanshah Aryamehr's declaration that petroleum should be used for its petrochemical derivatives rather than burned. To this end, NIGC is going ahead with a program



Gas loading facilities in Abadan

Jan Bu

ESTIMATED IRANIAN PROVEN AND PROBABLE GAS RESERVES AS OF JANUARY 1, 1975 - TRILLION CUBIC FEET

ARI	<u>EA</u>	PROVEN	PROBABLE
2- 3- 4- 5- 6- 7- 8- 9- 10- 11- 12- 13- 14- 15-	NIOC/SOUTHWEST KHANGIRAN TANG-E-BIJAR SARAJEH QESHM KANGAN B. STRUCTURE C. STRUCTURE F. STRUCTURE G. STRUCTURE AGHAR-1 AGHAR-2 BAND BAST TAKHTEH KHESHT HALEGAN NAR	210.0 18.0 3.4 1.0 4.0 11.0 50.0 25.0 17.0 15.0 20	210.0 18.0 3.4 1.0 27.0 21.0 89.0 96.0 66.0 39.0
	TOTAL	374.4	570.4

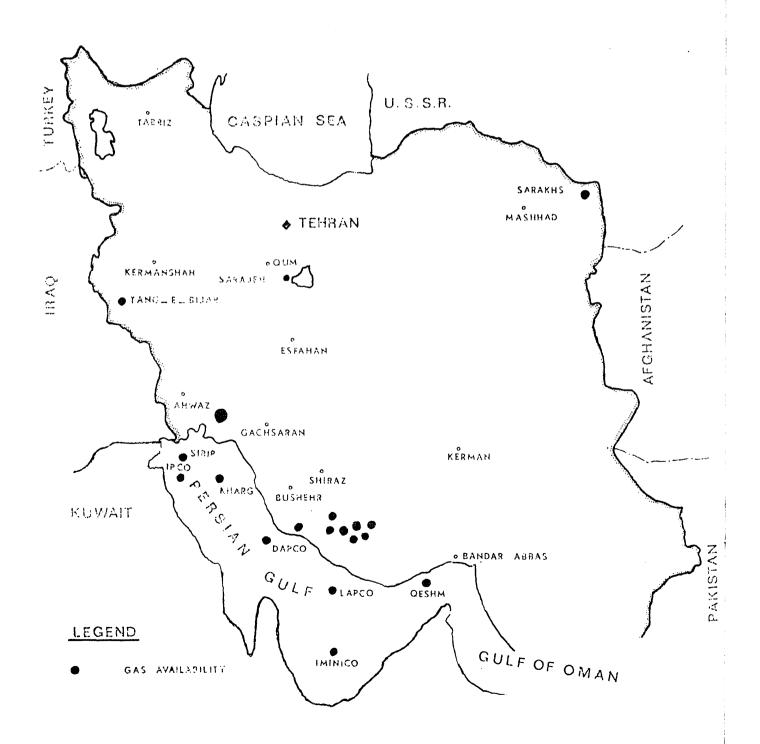
Note: Items 11-17 are under studies, and reserves have not been estimated yet.

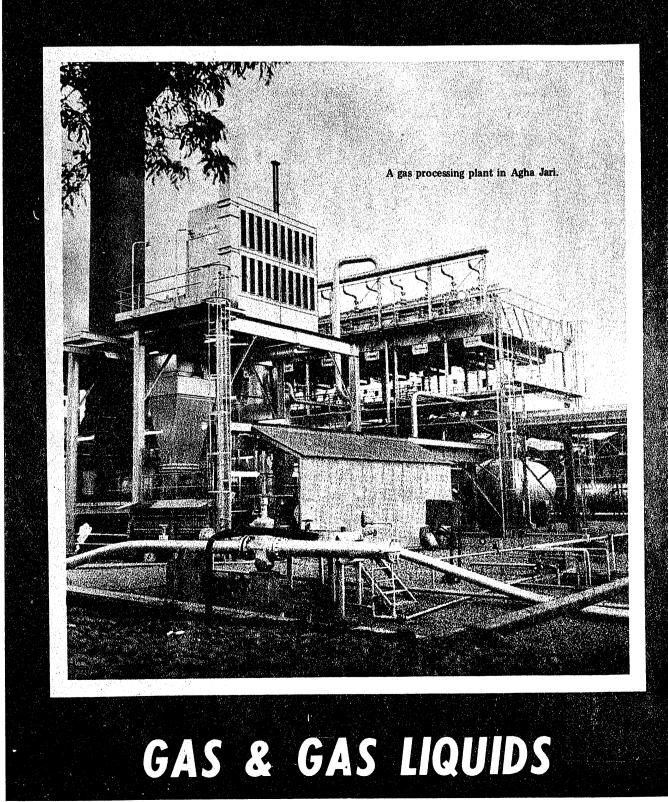
MAP VI USSR **USSR** CASPIAN SEA CONCESSIONS
Oil Service Company of Iran (former Consortium area) IMINOCO (NIOC / ENI / Phillips / Indian govt.)
NIGC (National Iranian Gas Co.) LAPCO (NIOC/Arco/Union of California/Murphy/Sun)
IROPCO (NIOC/Getty/Skelly/Superior/Sun/Kerr McGee/Cities Service/Arco)
BUSHCO (NIOC/Amerada Hess) 3 LAPCO 4 IROPCO (NIOC /Pan American) (NIOC /ENI) 6 IPAC 7 S.HIP (NIOC ENT)
8 SOFIRAN (NIOC ÉMERAP/Aquitaine)
9 PHILIBAN (NIOC PHILIPS)
10 EGGCO (NIOC EMERAP/ENI/Hispanoil/Petrolina/OMV) 14 Deminex 15 43/P 16 Ashland / Pan Canadian 17 CEP LEGEND GASFIELD --- PROPOSED GAS PIPELINE OIL AND GAS IN IRAN

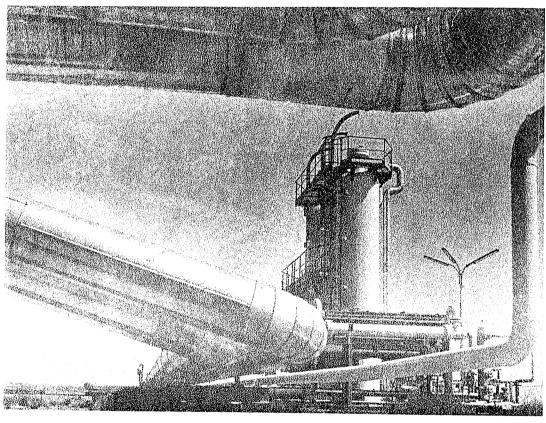
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MAP VII

GEOGRAPHICAL DISTRIBUTION OF IRANIAN GAS







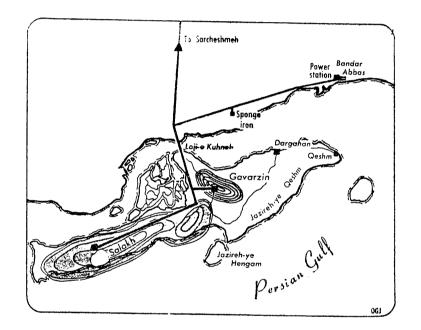
Sarakhs gas facilities in Khorasan Province,

aimed at supplying increasing quantities of associated and non-associated gas for commercial, domestic and industrial consumption in Iran. This domestic program involves a number of projects.

NIGC is at present planning a drilling program to determine the recoverable reserves of the gas discovery made on Qeshm Island in the Persian Gulf some years ago by the Consortium (current estimates are in the area of eight trillion cubic feet). The project involves the drilling of two gas fields namely Gavarzin and Salakh on Qeshm Island (see MapVIII)producing, gathering, and treating some 600 cfd pipeling gas. During the Fifth and Sixth Development Plans (ending in 1982), natural gas from Qeshm will be piped to Bandar Abbas (some 60 miles away) for use in power generation and industrial projects which include a direct-reduction steel mill with an initial capacity of 2 million tons per year rising to 5 million tons per year (see Map VIII). Qeshm gas will also be supplied to the Sarcheshmeh copper mill 248 miles from Bandar Abbas and to other cities and industries along this route. Once these projects are carried out, the quantities of Qeshm gas consumed are expected to exceed 800 Mcfd.

The Sarakhs-Neka pipeline (see Map VI) operating between Khangiran field and the city of Mashhad, is to be extended far westward to a total length of 527 miles. With reserves estimated at 3 trillion cubic feet of sweet gas and 18 trillion cubic feet of sour gas, the Sarakhs field is intended by NIGC to serve as a pivot for industrial

Qeshm Island gas



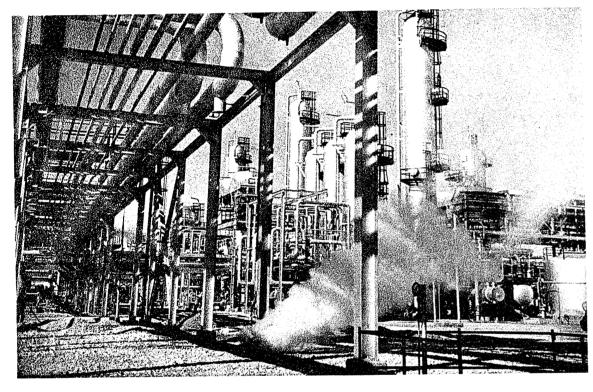
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Iranian gas distribution, pipeline routes

MAP VIII

Jan. Will



Bid Boland gas treating plant near Agha Jari, south Iran.

development in the north-west. In the second stage of the Sarakhs project, desulfurization facilities will be installed and the pipeline system will be extended to Neka near the Caspian Sea to feed a 1,400 megawatt power plant. The pipeline will also feed other cities along the route where industrial plans call for another direct-reduction steel mill and petrochemical plants. Gas utilization from the Sarakhs field is planned to rise under the second stage from the present 35 million cfd to 450 million cfd by 1977 and 800 million by 1982.

Rapid growth in the demand for natural gas in the Ahwaz area (see Map IX) is expected as a result of the industrialization programs invisioned in the Fifth and Sixth Five Year Plans. These projects include the construction of a direct-reduction steel mill with a capacity of 1.5 million tons

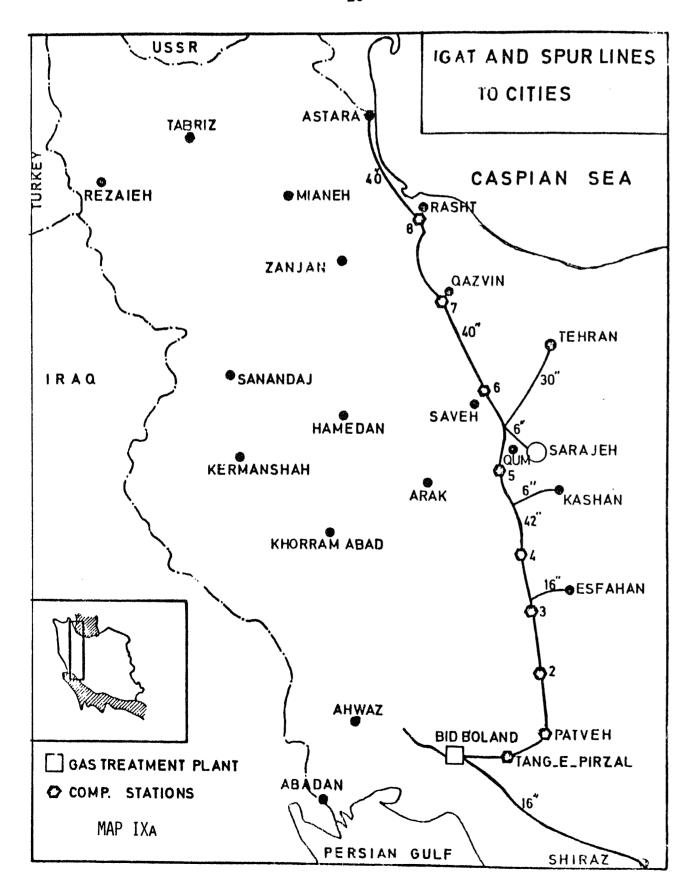
a year, power generating plants with a total output of 290 megawatts, and a cane-sugar plant at Haft-Tapeh (Map IX). NIGC's project in the area is designed to satisfy the demands of this industrially vital area. Currently, it is served by a 16-inch 6-mile gas line from neighboring oil fields, carrying about 4.5 Mcfd. NIGC plans to expand the associated gas network linking the city to 136 miles of pipeline with a capacity of 185 million cfd. It is also proposing to link the Ahwaz line into the Iranian Gas Trunkline (IGAT) system. (See Map IX and IXA). This would provide the industrial users with greater flexibility in gas supplies.

It is estimated that the internal market for gas consumption will increase by 30-35% annually. In 1974 NIGC distributed some 1.9 billion cubic

MAP IX



IRANIAN GAS DISTRIBUTION , PIPELINE ROUTES



meters of natural gas in six major urban and industrial areas throughout the country. Total sales during this period rocketed by some 42% over sales from the previous year. The largest consumer of gas was Tehran and its suburbs with a total of 719 million cubic meters. Qazvin consumed 410 million cubic meters. Isfahan consumed 377 million cubic meters. NIGC also concluded contracts with 277 major industrial units throughout the country for the use of natural gas as a basic fuel. Some 105 units have already been connected with the gas pipeline network and the remaining 172 will soon convert to gas. NIGC is also promoting the use of LNG for industrial use. Consumption of this fuel increased from 221,000 tons in 1973 to 267,000 tons in 1974.

)

In a related program that is designed to both spur the use of natural gas and to take action towards alleviating the increasing environmental problems caused by automobiles, NIGC is experimentally modifying a limited number of automobile engines to use both gasoline and pressurized natural gas. This would diminish pollution and increase engine life as well.

The Iranian government is also seeking to ease the transition from other fuel sources to natural gas by expanding the exploitation of gas resources, gas pipelines and distribution networks. The Government plans to encourage the construction of gas pipelines and distribution units by providing facilities through the Ministry of Roads and Transport and the municipalities throughout Iran. It will encourage the wider consumption by home and commercial users by providing financial facilities, such as bank credits and payment for installation on the installment plan. It will

offer incentives for industrial users and for power generation by lowering tariffs and ensuring regularity of supplies.

The son

The Iranian government's efforts towards substituting natural gas utilization for other sources of energy are shown in the projections of the following tables (X and XI) which give an idea of the changing energy consumption pattern expected in Iran in the next seven years. NIGC is planning to meet the consumption needs that are expected from the expansion of existing facilities and the establishment of new plants in the petrochemical industry. (See July, 1975 edition of "Profile on Iran.")

The discovery of substantial reserves in the south of Iran, which produces 40% of Iran's gas, has provided a basis for the gas export projects currently under consideration by NIGC. The discoveries have been of non-associated gas. This boom in gas activity along the shores of the Persian Gulf began in 1973, when the European Group Oil Company (EGOCO) announced that it had found a major gas deposit. In February 1974, strikes were made at the Aghar and Band-e Bast wildcats. As things progressed, one new field after another was discovered in the area and offshore. It appears that at least 14 fields were discovered. On the basis of these discoveries NIGC is discussing the following gas export projects with foreign partners:

- Kalingas is planning an LNG project using C structure reserves to liquefy 800 million cfd of gas for export to Japan from a plant to be built near Kangan, south of Bushehr. The ultimate capacity of the project may rise to 1.6 billion cfd.

TABLE X

Iran's Estimated Consumption of Energy During Certain Year

(All figures in thousands of millions)

Petrochemical products	$\frac{1960}{132,000}$	1975 555,900	1982* 963,546
% Petrochemical products	76.7%	69.2%	56.9%
Natural Gas	• •	43,319	623,682
% Natural Gas	_	7.7%	36.8%
Hydroelectricity and coal	28,600	105,000	103,500
Other fuels	11,500	5,300	3,600
% Other fuels	6.7%	0.6%	0.1%
Total	172,000	709,519	694,328

^{*} Excluding energy from atomic reactors, from 1982, gradually there will be surplus of energy from other sources.

Source: NIOC, Iran Oil Journal, January, 1973

Iran's Consumption & Export Of Natural Gas

In Million Cu. Ft.

	1974		
AREAS	Oct.	Nov.	Dec.
By N.I.O.C.	40.5	40.5	41.5
Oil Service Company of Iran	7,768.2	7,352.1	7,944.2
Affiliated Cos.	350.1	351.5	342.0
Delivered To:			
N.l.O.C. Ahwaz	248.0	240.0	248.0
Abadan Refinery	3,011.3	3,163.6	3,275.6
Kharg Petrochemical	4,458.6	4,265.5	4,369.6
Commercial, Industrial,	.	·	
Domestic, Consumption & Others	23,100.3	22,434.9	25,161.1
Exports To U.S.S.R.	27,913.0	28,930.0	30,653.0
TOTAL	66,890.0	66,778.1	72,035.0

Source: Iran Oil Journal (Spring, 1975)

TABLE XI

GAS CONSUMPTION FORCA	ST 970	1973	1975	1980
(MILLION CU. F. / D.)				
OIL FIELDS CONS.	924.0	0.818	1164.0	1367.0
DOMESTIC & CONS.	0.3	1.2	4.0	42 8
ELECTRIC GEN.	2.0	58.8	156.4	724.6
INDUSTRIES . INCLUDING STEEL MILL . DIRECT REDUCTION PROCESS & PETROCHEMICAL	15.1	68.0	180.5	1036.0
TOTAL	941.4	944.0	1504.9	3170.4

. ASSOCIATED & NON ASSOCIATED

•• ESTIMATED

- A trilateral deal involving the delivery of 1.3 billion cfd of Iranian gas to the USSR and the supply of some 1 billion cfd of Russian gas to West Germany over a period of 25 years is under discussion between NIGC and the foreign partners.

- NIGC signed a letter of intent with El Paso Natural Gas of the United States and two Belgian companies, Sopex and Distrigaz, for a project to export LNG to Europe and the U.S. (MEES, January 3). The quantities involved - which would presumably come from Egoco's onshore finds - are 2 billion cfd in the initial stage rising in later stages to 3 billion cfd, and it is presently envisaged that deliveries would begin some

time in the early 1980's.

An earlier agreement between NIGC and Transco of the United States on a \$650-million project to produce natural gas liquids and methanol from Khuzestan associated gas was never approved by the Iranian authorities, due to uncertainties as to the gas needs of the NIOC secondary recovery program. Transco is continuing talks with NIOC and NIGC, but the project as envisaged in its original form will not be carried out.

Natural Gas Exports

The enormity of the gas deposits recently discovered have led to plans by NIGC for LNG-export projects, and two are in

the planning stage. The newly discovered fields have placed Iran in the position of being the owner of the second largest non-associated gas fields in the world with a probable 338 trillion cubic feet in reserves. Thus, NIGC is discussing the following gas export projects with foreign partners.

In 1973, the Kalingas group was formed to reappraise the find. Kalingas includes NIGC (50%) and the International Systems and Controls group (50%). The ISC group includes Chicago Bridge & Iron, Japan's Nissho Iwai Co., Norway's Halden Ditler-Simonsen and Lone Star Gas Co.

Kalingas plans to build an LNG gas liquefication plant near Dayyer, west of Kangan, which will process 1.3 billion cfd and produce the liquid equivalent of 800 MMcfd. It will use gas from the C structure as feedstock. Original cost estimate for the project was \$700 million in 1972. Including a needed 13-19 tankers, the cost could soar to \$2.5 billion. A letter of agreement has been signed by NIGC for a second LNGexport project in the Kangan area. This is with El Paso Natural Gas Co. and two Belgian companies, Sopex and Dristrigaz. It would have a 3-billion cfd capacity, with output to be aimed at the U.S. and Europe. It probably will draw its feedstock from both the offshore and onshore gas fields. It is due on stream in the early 1980's. There is yet another possibility. NIGC's Shirazi says two alternatives are being considered to the El Paso project. The first is based on transmission of natural gas from Iran's southern fields to Iskenderun, Turkey, where the gas would be liquefied and shipped to western Europe and the U.S. East coast.

The second alternative envisages construction of an LNG

plant near Kangan on the Persian Gulf and shipments through the Suez Canal to the same destinations. Total capital requirement for the second alternative has been estimated at about \$6 billion.

Considering its vast resources of natural gas, Iran will undoubtedly play a great role in supplying part of the energy requirements of the Soviet Union, Japan, Europe and the United States which can be considered as the future market of this country.

In addition to the IGAT system (see Map IX and IXa) NIGC has a number of export projects under study and negotiations. These projects involve considerable amounts of natural gas to be exported either through pipeline or shipped as LNG for destinations in Europe, the United States and possibly Japan. It is anticipated that once these projects are realized, Iran will hold a leading position among the countries exporting natural gas to the international markets.

It is realized that in comparison to some other gas exporting countries, Iran's geographical location imposes some disadvantages. However, distinct political stability and huge gas resources of Iran, the continuity of supply that such stability and vast resources can provide and the rapidly increasing interest for natural gas as a clean and economical source of energy. It is believed therefore, that the prospects of natural gas export from Iran is very bright and in the near future, Iranian natural gas will reach many consuming centers in the world just as the petroleum of the country does at present.

Currently, Iran supplies natural gas only to the Soviet Union via the IGAT system.



Agreement is signed between National Iranian Gas Company (NIGC) and American Energy Company.

Export to the Soviet Union started in 1970 under a special barter deal whereby the Soviets agreed to provide Iran with a steel mill and other equipment in exchange for natural gas.

In 1970, NIGC completed construction of the 660-mile Iranian Gas Trunkline, extending from the oilfields in the Consortium area to Khairabad on the northern border, and shipments to the Soviet Union began late in that year. The original contract specified shipments of 10 billion cubic meters (354 billion cubic feet) per year. Present plans, however, call for the delivery of an additional 13 billion cubic meters to the Soviet Union, which in turn would furnish 10 billion cubic meters to West Germany, keeping the remaining 3 billion cubic meters as its transit fee. In

August, 1974 it was agreed to raise the price of the gas by 85% to \$0.57 per 1,000 cubic feet. This compares with the previous price of \$0.30 per 1,000 cubic feet. In 1974, exports of gas to the USSR amounted to 321 BCF or over 43% of all gases utilized and sold by Iran.

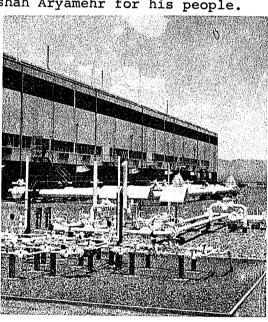
Recent advances in liquefied natural gas (LNG) technology have opened up vast new possibilities for the marketing of Iran's gas overseas. Since 1971, NIGC has entered into a number of joint-venture agreements with foreign companies or groups of companies. The agreements, in addition to the sale of the gas, involve the construction of pipelines and LNG plants and, in some cases, the procurement of LNG tankers. The largest such agreement, signed in December 1974 with an American-

Belgium consortium, calls for the production and export of 3 billion cubic feet per day by 1985 - almost half of NIGC's total gas export target of 6.5 billion cubic feet per day for

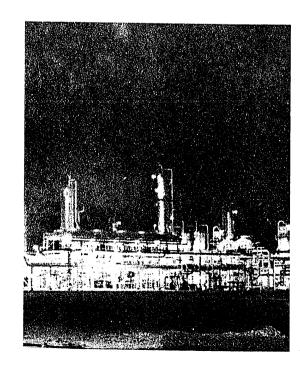
that year. As outlined, the program for the expansion of the natural gas industry in Iran appears quite ambitious. In the past ten years alone the average rate of growth for the gas industry notwithstanding the volume used in petrochemicals and exports to the Soviet Union, is 580 per cent per year. NIGC officials have stated that the total gas reserves in Iran are estimated from 374 to 600 trillion cubic feet. Of this amount, some 100 to 300 trillion cubic feet are located offshore.

Despite the fact that NIGC's program is only recently under way, the figures indicate that Iran's reserves are going to prove to be in the upper range of the estimates. Present unofficial estimates for the Sarakhs, Qeshm, C structure and Egoco reserves add up to some 260-300 trillion cubic feet, while recoverable reserves of associated gas from the Khuzestan fields have been put at 200 trillion cubic feet by an NIGC spokesman. Add to this already discovered deposits whose size is still not known (NIOC discoveries at Sarajeh near Qum and Tang-e-Bihar near Naft-e-Shah, and the Phillips find in the south-west) and the potential is even higher. Overall, an appropriately conservative estimate of reserves might be in the range of 400 trillion cubic feet, and if the new finds on the south turn out to be as promising as they seem, Iran will clearly be in a position to make its gas industry a force to be reckoned with. In fact, it is anticipated that earnings from exports of this vast reservoir of gas will soon reach \$2-3 billion per year.

The NIGC project is a landmark program in the Middle East as another example of the energy and farsightedness which Iran's planners are exhibiting in their drive to transform Iran into the Great Civilization envisioned by His Imperial Majesty the Shahanshah Aryamehr for his people.



A gas booster station



ENVIRONMENTAL PROTECTION IN IRAN

The topic of conservation and environmental protection in Iran is considered so vast that it will be divided into two sections. Part 1, "The Physical Environment," appears in this issue of PROFILE ON IRAN and Part 2, entitled "Wildlife and Nature Conservation" will appear in the September edition.

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### Part 1 - Physical Environment

From the dawn of Iranian nistory, the Zoroastrian faith conceived of earth as being mother nature and sacred and pollution of the environment as a sin. Our present Islamic traditions are also based on a reverence for life and the phenomena of nature. This attitude was manifested in our religious and philosophical traditions as well as in art forms, artifacts, patterns and motifs based on symbolic recall of nature's ways.

This reverence for nature led man to live in harmony with his surroundings. To him, the space which lay beyond the village or the city was too large and the horizons too distant to be within his comprehension and grasp. The famous Persian gardens, well illustrate man's unconscious need to reduce his contacts with nature to a manageable scale in order to remain in harmony with his environment.

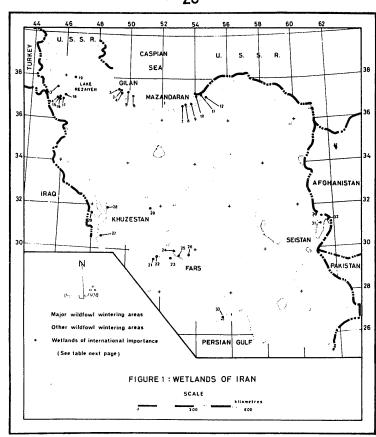
Today, the awesome and rapid introduction of Western technologies and life styles into Iran have considerably altered the traditional balances between man and his environment.

It must be understood that any effort to raise the standards of living will inevitably require modification of the environment. Constructing roads, dams, airports, irrigation and sewage systems, power plants and industrial facilities, result in ecological problems. Although these man-made changes have greatly improved the state of well-being of man in longevity, health and material wealth, unless the resulting environmental damages are not repaired and arrested, the resulting effects will prove to be far more harmful than what is gained.

Jan.

Such problems have beset Iran. In one generation, the country's population has nearly trebled from approximately 12 million to 33 million. During this period, a small agrarian economy has developed into a thriving industrial complex.

Polluted air and water are only a part of Iran's growing environmental problems; the transformation and destruction of ecosystems is ever more pressing. What nature has taken millions of years to create, one generation has managed to transform and destroy. Plant communi-



ties such as the Caspian forests would have been totally decimated had not His Imperial Majesty the Shahanshah Aryamehr personally intervened to preserve them. Of more than six million hectares, only 3.4 million remain today. Regarding other forests, particularly in the Zagros mountains, it would be optimistic to estimate that one million hectares remain today - one tenth of Iran's forested area before World War II. At that time, it was apparent that certain species, notably gazelles and wild ass, were being threatened with extinction.

Environmental degradation is a multi-faceted and complex crisis facing our planet today. There are people and governments who seem to feel that environmental problems are virtually pre-ordainedas an integral part of progress and that man

must learn to live without clear rivers, pure air, forests and wildlife. This is certainly not the view of the government of Iran.

The government of Iran began a decade ago to implement various programs on a national scale. Besides the nationalization of forests, rangeland, and water resources to ensure a rational utilization of natural resources, the Department of Environmental Conservation was established in 1971.

Moreover, environmental reserves have been created with an area of nine million hectares, representing virtually all the major ecosystems of the countryfrom the rain forests of the Caspian to the mangrove swamps of the Persian Gulf, from the snow-clad Zagros mountains to the arid plains of Khorrasan.

Many species of plants have been propogated to stabilize the soil and arrest erosion in deserts and water sheds. Petroleum is also used as a mulch and as a means of sand dune fixation.

Funds have been allocated and appropriate steps are being taken to establish an urgently needed monitoring service to control pollution in the Persian Gulf and the Sea of Oman; and with this goal in mind, an antipollution law has been drafted.

The problems of population growth, which can negate and defeat the finest efforts at environmental planning, have necessitated the establishment of a nationwide family planning service.

The importance of long term planning for the human environmental problems is at the heart of Iran's development plans.

Much encouragement is given to the development of non-polluting industries which lend themselves well to the self-regulating development of urban areas. They tend to strengthen community and family bonds and place a smaller strain on surrounding ecosystems.

Iran, a vast nation of great natural beauty and startling contrasts, is rapidly developing in all areas. It is the purpose of this article to describe the impetus and priorities assigned to this vital task as Iran enters into a new era.

Population growth, industrialization and rapid development in all spheres have necessitated measures to preserve
and maintain a healthy environment for the present and future
generations. We know that unless
fundamental and long-range plans
are formulated and pursued, the
best manipulation of the present
implies no certitude of success

for our future environment. By virtue of the vision and leadership of His Imperial Majesty, revolutionary reform laws were enacted in Iran during the past decade for a rational utilization of the nation's natural resources. As mentioned earlier, the Department of Environmental Conversation came into being in 1971 for the protection and enhancement of the environment and for the prevention of any form of pollution and damage leading to the disturbance or destruction in the ecological balance of the environment.

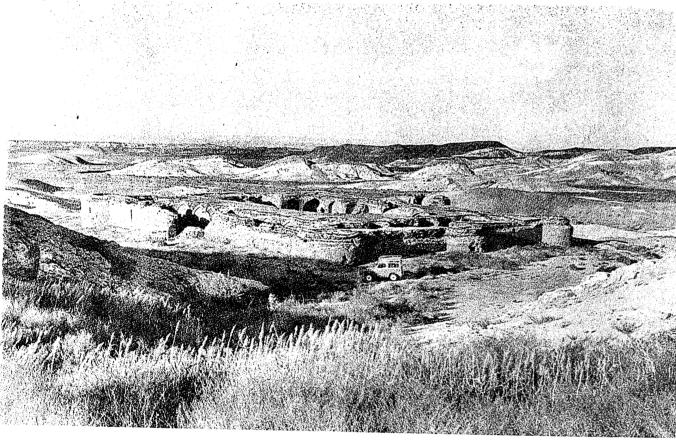
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Our awareness of the need to plan for man's material as well as spiritual values, for economic growth as well as environmental quality for this generation and posterity resulted in a reappraisal of the effects of Iran's five-year development plans on the environment. Thus the Fifth Development Plan (1973-78) marks the first occasion that environmental conservation appears as a part of development planning.

Investment and expenditure in environmental protection during the Fifth Plan will total \$204 million. Of this, fixed investment will account for \$88.7 million, non-fixed investment for \$85.8 million and current expenditure for \$29.5 million. In addition to the amount earmarked directly for environmental protection activities by the Department of the Environment, this sum includes allocations in such sectors as agriculture, health, urban development and water. This is a significant step towards helping to ensure that environmental considerations become an integral part of national development activities.

### The Action Program

The Human Environment of the Department of Environmental Con-



Ruins of the Ein-ol-Rashid caravanserai, Kavir Protected Region.

servation was created in the spring of 1973 and is functioning in the following areas:

# Air Pollution Monitoring and Control

Air pollution has become a fact of life for all large cities in Iran. The rugged and beautiful mountains surrounding Tehran on three sides are at times hidden by a grey-yellow pall, except after the occasional rain or snowfall.

This pollution is not only an environmental blight, but a health hazard as well, for the amount of carbon monoxide and other noxious gases often exceed public health safety standards. A program of air pollution monitoring and control is being set up by the Department in all major cities in Iran. This will include:

- Studies to detect the amount of pollution in the air. Parameters to be measured routinely include SO2, CO, NOx, O3, particulate matter and others.
- The study of complex organic compounds, most of which are unknown. The study will use advanced "electronspin resonance" techniques for qualitative identification of these compounds.
- A series of three stations for monitoring background air pollution in remote and rural areas in cooperation with the National Weather Bureau of the Ministry of Roads. These projects are a part of a plan being implemented by the World Meteorological Organization for the creation of a global background air pollution monitoring network.
- A center for internal combustion engine research. The

growth of automobile industries in Iran makes this a valuable project with respect to the fuels and equipment suitable to Iran and the standards to be devised.

- The determination of the pollution status of various industries, to set criteria and to decide upon measures for the reduction or elimination of such pollution. A fine example of the results obtained in this sector is a huge 1400 megawatt power plant to be built on the southeastern shores of the Caspian Sea - one of the best regions in the country for agriculture, wildlife, fisheries and recreation - which was required by the Department to use fuel desulfurized to 1% (from 3.7%) by 1978 and to .05% by 1983.

### Aquatic Ecosystems

The Department has jurisdiction over all conservation and fishery activities in the inland waters of the country and is charged with the task of conducting biological investigations and implementing measures against pollution of the Caspian Sea, the Persian Gulf and the Sea of Oman.

Inland Waters. The work in this sector began several years ago and includes the study of the rivers, lakes and wetlands of Iran. It involves hydrobiology, limnology, fisheries and aquatic collections. The securing of baseline data on the biological and chemical characteristics of these waters has been assigned special prior-



Eastern part of Mohammad Reza Shah National Par

ity, not only for the continuation of the fisheries management program but also as a source of vital information for the work of the environmental Engineering Task force.

A fish stocking program was begun a few years ago to introduce both the native brown and rainbow trouts in a number of suitable waters. To date some 3.5 million fingerlings have been released in lakes behind dams, lakes high up in the Zagros and Alborz mountains and various streams, particularly in the northern part of the country. In the future, greater emphasis will be placed on the maintenance of watersheds with a view to rehabilitating many of the potentially productive streams for the purpose of expanding and improving fishing as a sport.

The Caspian Sea. What has been said above in regard to environmental measures for inland waters applies in general to the Caspian (the largest inland body of water in the world) except that jurisdiction over the commercial exploitation of the fisheries rests with the Northern Fisheries Company. Widespread pollution, emanating from the petroleum industry, agricultural chemicals and industrial and urban wastes pose a real threat to the health of the Caspian Sea. To counter this threat, an agreement was signed with the USSR in June, 1973 for joint action on anti-pollution measures. The Department has since established a laboratory in Chalus for relevant marine studies and intends to create similar laboratories in the eastern and western sectors of the Caspian region.

The Persian Gulf and the Sea of Oman. A series of research and monitoring stations are planned for Bushehr/Kharg, Bandar Abbas/ Hormoz, and Chahbahar. With the

assistance of the United Nations Environmental Program, a study will be initiated to investigate the effect and fate of pollutants, such as oil in warm water.

### Environmental Engineering

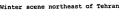
To cope with the enormous and complex problem of water and air pollution, the Department has created a special Environmental Engineering Task Force. The task force has the duty of (1) determining the sources and extent of pollution, (2) establishing and enforcing improved standards for air, water and waste-water control, (3) investigating technology especially suited for Iranian needs for water and wastewater control and reclamation, and (4) coordinating such work with other relevant government agencies, municipalities and industry.

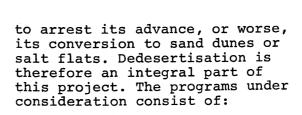
Industries have already been classified in accordance with the type of pollution they cause. In view of the low average rainfall in Iran, cultivable soil is very precious to the nation. Therefore, it is vital that its productivity be preserved for people as well as plants and wildlife. A substantial program in this field has been started and includes the following:

- survey of ecological characteristics of Iranian soils
- ecological effects of fertilizers
  - soil pollution

Special attention has been given to arid zones of Iran, which comprise a tremendous proportion of the country's area. The project is of paramount importance because of the abuse of the natural environment referred to previously. The desert must be used rationally in order







- 1) A survey of arid zone resources
- Studies in evolution and adaption
- 3) Dedesertisation strategies

### Pesticides and Habitat Management

Evidence of increasing environmental contamination by pesticides is a matter of great concern to the Department of Environment. A program in pesticides and habitat management has been set up to study the magnitude and extent of

this problem and its effects on wildlife and the human environment; to establish and disseminate alternatives to the use of synthetic organic pesticides and to establish relevant standards and guidelines governing the use of pesticides. To achieve these objectives, the following projects are being carried out:

- 1) Effects of pesticides on non-target organisms.
- 2) Pesticide monitoring
- Chronic effects of pesticides
- 4) Research in alternatives to vector control
- 5) Genetics of vectors
- 6) Pesticide use in agriculture



# Improvement of the Physical Environment

In this sector a suitable program is being developed in stages to include the prevention of the despoliation of natural landscapes, reclamation and improvement of mine lands and landscaping of highways and rural areas. Other aspects will involve rural waste collection and

disposal, regulations governing countryside bill-boards and advertisements and siting of factories and transmission lines.

Plans are also made to develop scenic routes, including provisions for rest, picnic and camping areas, where environmental protection information can be made available to travelers.



### SHAHANSHAH DECLARES THE 13TH AND 14TH PRINCIPLES OF THE WHITE REVOLUTION

At the Salaam ceremonies in honor of the Mab'as celebrations (the anniversary of Mohammad's mission as prophet) the widening of the ownership of industry and equitable pricing as the 13th and 14th principles of the Revolution of the Shah and the People was proclaimed by His Imperial Majesty, the Shahanshah Aryamehr. These represent the first additions since the 12th point regarding administrative and educational reforms, was declared in 1967.

The royal decree expanding the ownership of industrial plants is designed to prevent the development of "industrial feudalism' in Iran. Beginning in 1963, Iran instituted an effective and farreaching land reform program (1st point of the Revolution) ending feudal land ownership and providing a more equal opportunity for all members of the rural community. As Iran's industrial progress accelerates, the Shahanshah is ensuring that the harvest of the nation's economic miracle will be reaped by the widest number of people. Accordingly, share participation will put 49 per cent of the shares of private sector industry and 99 per cent of the shares of stateowned industry into the hands of the public. Workers will have first priority in purchasing shares, followed by salaried personnel, farmers and the general public. This policy should aid in avoiding industrial conflict while furnishing capital and giving labor a direct incentive to contribute to a healthy industrial expansion. It will also ensure a higher standard of living for workers and farmers and create a growing market for industrial goods.

While share ownership by a large segment of the population

might require adjustments by industry, in the long run it will strengthen the foundations of the economy and multiply the links between the various social groups and classes.

The 14th point of the Revolution, the anti-profiteering principle, is a step to institutionalize the campaign begun by the Shahanshah one month ago to combat inflation and reduce the unjustifiable profits made by some middlemen and selfseeking entrepreneurs. In a speech commemorating the 69th anniversary of Iran's Constitution, in early August, the Shahanshah emphasized that excess profits are a form of exploitation and do not benefit the general public:

"Iran's democracy today is not only a political democracy, but an economic one, which is based on a democratic economy and social justice.

In Iran's society today, no individual or group enjoys individual and social rights which differ from anyone else's. Thus, any policy which is adopted and any decision which is made, is based solely on the good of the entire society.

The anti-profiteering campaign which is currently underway throughout the nation is one of the facets of this overall policy.

For over-charging in truth is a form of exploitation by some people of others. Of course, the purpose is not to prevent people from profiting from their work; but any profit must be a legitimate profit."

Last month, before the Shahanshah issued specific instructions to end the unwarranted price-gauging, inflation in Iran had been soaring at a rate of about 25%. Farm products were marked in shops at prices 10 times greater than on the farm. Manufacturers have been taking advantage of high demand and shortage to jack up prices. Others withheld goods in the shops in order to create artificial shortages. Some middlemen even profiteered on items such as meat and cement, which are subsidized by the Government at taxpayers' expense.

A two-pronged attack on the problem was launched:

1) Certain manufacturers, importers, retailers and distributors were found to be responsible for unfair price increases especially in food items and building materials. As a result, over 8,000 people from all parts of Iran were arrested on charges of price rigging, profiteering, hoarding and obstructing the price campaign. Additionally, 70 mobile units and approximately 10 roving courts were established which inspected over 50,000 retailers to prevent price fixing.

2) The government of Iran has begun to reorganize its administrative capability to sustain a long battle against price increases. A special orientation program for selected army officers to enforce the goals of the pro-

gram has been established which will be used if voluntary compliance is not forthcoming. In addition, the Rastakhiz (Resurgence) Party mobilized its resources to arouse popular support for the policy. The Ministry of Commerce will keep a careful check on prices to ensure a fair but not excessive profit for importers, manufacturers and merchants. Student organizations have have lent their support and cooperation for the purpose of achieving this goal.

While the anti-profiteering campaign is still in its early stages, notable success has already been achieved. The government-owned City and Rural Cooperative Stores have cut prices up to 20% and the government has set prices for nearly 800 essential commodities. As a result, in the first week of August the price of food fell by 6.3 per cent and the cost of living index dropped 3.3 per cent. Overall, the cost of living has dropped by more than 4 per cent.

Thus, with the adoption of the 13th and 14th points of the Shah-People Revolution, Iran is attempting to create a more equitable society and combat an inordinately high rate of inflation.



VISIT OF THEIR MAJESTIES
KING HUSSEIN AND QUEEN ALIA



Their Masesties King Hussein and Queen Alia of Jordan are greeted by Their Imperial Majesties the Shahanshah Aryamehr and Empress Farah at Mehrabas Airport.

Their Majesties King Hussein and Queen Alia of Jordan arrived in Tehran for a private visit on July 23rd.

The Shahanshah and Empress Farah as well as a host of other government officials were present at Mehrabad Airport to greet the royal Hashemite couple.

His Majesty King Hussein's entourage included Prime Minister Rafai, Minister of Court Prince Riad and a number of other high officials.

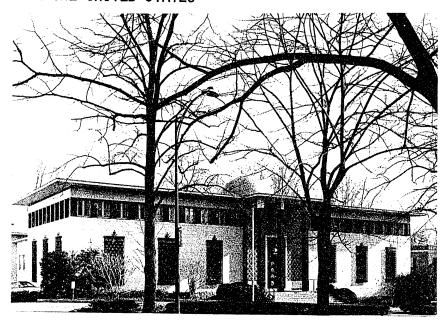
After the arrival ceremonies

at the airport, Their Imperial Majesties and the royal couple flew to the Caspian resort of Ramsar for a short stay.

Although this visit was private and brief, the Heads of States of Iran and Jordan were afforded the opportunity of strengthening the bonds of close understanding and amity which have traditionally existed between the two countries. The two monarchs exchanged views on topics of mutual interest and concern.

King Hussein and Queen Alia left Iran on July 27th.

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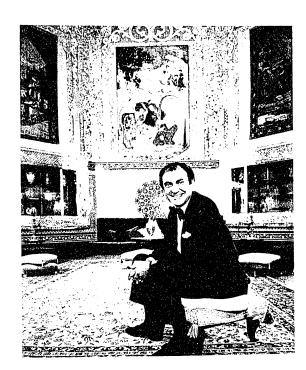
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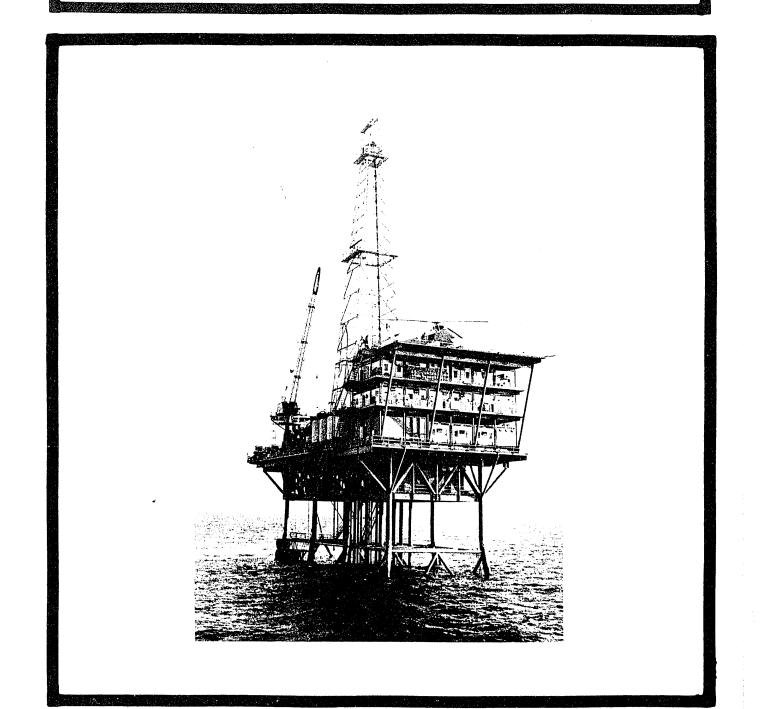
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# PROFILE ON JUNE, 1975 TRANS TRANS



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The Royal Family

### THE HISTORY OF OIL IN IRAN

With average daily oil production exceeding 5.5 million barrels and oil revenues currently at \$21 billion per year, it is not surprising that the oil industry in Iran is the nation's major source of revenue and indeed the cornerstone to economic development. While public concern and interest over oil production has grown in the 1970s, particularly after the price increases of 1973-74, the petroleum industry in Iran has a long history, dating back to the beginning of the twentieth century.

### Ancient Oil Deposits and Uses

Oil and bitumen deposits in the Qasr-i-Shirin region (central area along the Iranian-Iraqi border) were employed in a variety of ways by the ancient Persians. Bitumen collected on the ground and taken by donkeys and camels to a place of melting was used by builders as a floor-sealing material, by ship-builders as caulking and to line water channels. It was also a useful resource to potters, jewellers, tool makers and other craftsmen. Petroleum collected from seepages or from a surface trickle of crude was used in a type of kerosene lamp and also to light arrows in times of war. In Khuzistan, natural gas marked the site of temples of the fire-venerating Zoroastrians. Alexander the Great is quoted by Plutarch as beholding in awe the stream of fire near Ekbatana, the capital of the ancient Persian Empire.

It should be noted, however, that the connection between the surface appearances of oil and the presence of commercially exploitable deposits of oil is often misleading. Primitive

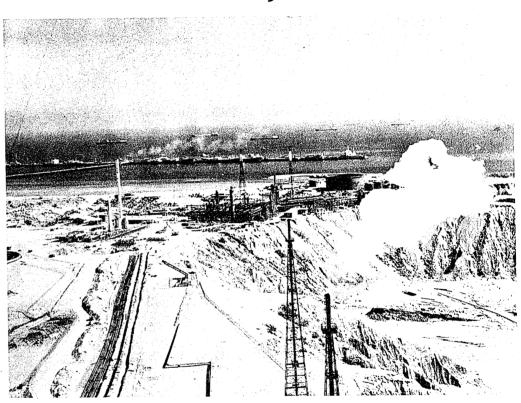
man had no concept of an oil pool on a scale which exists today and the scattered surface deposits were simply considered minor mysteries of nature.

# The Development of the Modern Oil Industry

Iran was the first country in the Middle East to develop a modern petroleum industry. A wide range of concessions, including the sole right to exploit Īran's oil resources for 70 years, was granted to Baron Julius de Reuter from Britain in 1872 by Nasir ed-Din Shah. Russian reaction to the agreement was hostile and in 1873 the Shah canceled the concession and confiscated de Reuter's 40,000 pounds deposit because work had not begun within fifteen months as stipulated in the contract. In 1884, the firm of Hotz and Co. of Bushire were permitted to drill for oil, with the crude appliances of the time, near seepages at Daliki in the Fars province. Their efforts failed.

Five years later, de Reuter obtained a second concession which granted him a 60-year right to exploit Iran's mineral wealth, including oil. The Persian Bank Mining Rights Corporation, organized by Baron de Reuter, searched two years for oil without success. In 1901, the Iranian government declared the mineral concession void and the mining corporation was liquidated.

Due to extravagant domestic expenditures, increasing foreign indebtedness and a lack of appreciation of Iran's mineral resources, Muzaffar ed-Din Shah granted a 60-year concession to William Knox D'Arcy of Britain to "search for, obtain, exploit, develop, render suitable for trade, carry away and



Aerial view of petrochemical plant and loading terminal at Kharg Island

sell natural gas, petroleum, asphalt and ozocerite throughout the whole extent of the Persian Empire" with the exception of the five northern provinces of Iran where the Russians had concessionary arrangements.

The concession embraced 500, 000 square miles, an area somewhat larger than half the United States east of the Mississippi River. It granted D'Arcy the exclusive right to lay pipelines to the Persian Gulf and made available all land within the concession (except holy places) for D'Arcy's operations. D'Arcy agreed to employ Iranians exclusively, except for managerial and technical staff. When the concession expired D'Arcy was to turn over to the government without charge all materials, buildings, and equipment used by him. In return for these rights the exploiting

company or companies were to pay the government of Iran within a month of their formation twenty thousand pounds in cash, twenty thousand pounds in stock, 16 percent of the annual net profits and a fixed sum of 2,000 tomans (\$1,800 per year).

Early drilling attempts failed because of inadequate surveys, harsh physical conditions in a largely undeveloped infrastructure, primitive technology and some tribal opposition. Between 1901 and 1905, a total of 203,000 pounds was invested by D'Arcy in Iranian oil operations, and in the following three years the Burmah Oil Company and the Scottish financier Lord Stratncona assisted a near bankrupt D'Arcy by investing 177,000 pounds in drilling operations. Thus a total of 400,000 pounds was invested in Iran in oil exploration before May 28, 1908 when oil was

struck in commercial quantities at No. 1 Well at Masjid-i-Sulaiman in south-west Iran.

The newly formed Anglo-Persian Oil Company (APOC) intensified exploration for oil and rapidly increased oil production from 43,000 tons in 1912 to 80,000 tons in 1913 and 273,000 tons in 1914. The foundation of the modern oil industry in Iran had been laid and the rudiment of a technically trained cadre of Iranians had been established. With no significant oil production in the British Empire, the importance of Iranian oil was clear to the British government. Winston Churchill, First Lord of Admiralty, emphasized the necessity of reliable oil supplies in the House of Commons as early as 1912. As a result of a Royal Commission report, the APOC was to be supported by the British government and a fuel-supply contract was concluded in May, 1914, a few months before the outbreak of World War I.

### World War I

The First World War produced two contrasting effects on Iran's oil production:

- 1) damage and disruption to oil pipelines and installations caused by fighting in the Persian Gulf region between British and Turk-ish troops.
- 2) a rapid expansion of the oil industry in Iran in response to the Allied fuel needs in the war.

Crude production grew from 273,000 tons in 1914 to 376,000, 449,000, 644,000 and 897,000 tons in the four succeeding years, to 1,106,000 in 1919 and to 1,385,000 tons in 1920. The staff and labor force of Iranians (the vast majority), Indians, and British increased with the scale of work.

Improvements and extensions were made in the engineering, industrial, and administrative arrangements. Road and bridge building began seriously in 1918; the use of mechanical transport grew rapidly and reduced the time required for the journey from Abadan to Fields from five days to eight hours. Increased use was made of electric power. The pipeline capacity to Abadan was more than doubled and by the end of the war stood at 3 million tons a year. At the Abadan refinery the construction of new units kept pace with pipeline increases, as these came progressively into operation; its capacity, 120,000 tons a year in 1913, was in 1918 over a million. Connected installations and services of all kinds expanded correspondingly; including extended wharves and jetties.

The royalties and shareinterest paid to the Iranian Treasury up to April 1919, amounted to 1,325,000 and for the year 1919-20 were 470,000 pounds.

### The Inter-War Period

Two disputes, one regarding the cost of repairing pipeline severed during World War I and the other over the calculation of the 16% net profits due the Iranian government, were resolved by the Armitage-Smith agreement in 1920. Increased exploration and drilling coupled with technical break-throughs led to expanded oil production, though it was still concentrated in the south-western corner of Iran.

Production amounted to 1.1 million tons in 1919 and to 1.38, 1.74, and 2.32 millions repsectively in 1920, 1921 and 1922. APOC's increased profits permitted the payment of sub-

stantial annual sums in royalty and as dividends to the Iranian Treasury; they amounted to 585,000 pounds for the year 1920-21 and to 593,000 pounds a year later.

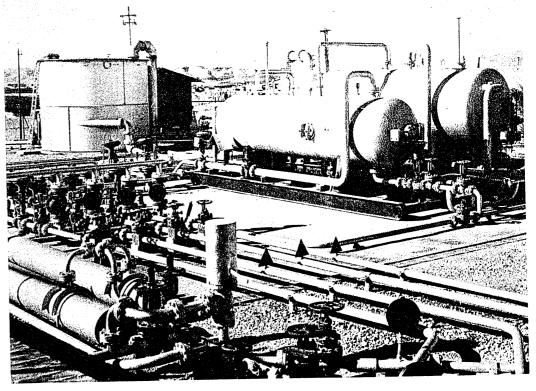
Under the reign of Reza Shah the Great (1925-41), father of modern Iran and the founder of the Pahlavi dynasty, increased economic and political order was brought to Iran. During this period, the nation's oil exports totalled 105 million tons for which it received 35 million pounds in payments.

Part of the oil income was transferred to the national reserves account and some was used for the purchase of arms and ammunition and to construct the Trans-Iranian Railway. Another portion was placed in a special account and from 1929 formed (together with the

crown jewels and bullion reserves) the backing for the new bank notes. The balance of the oil income, about 10 per cent, was included in the national budget and used for ordinary expenses.

Time.

Until 1923 nearly all the oil consumed in Iran, which in the year did not exceed 29,000 tons, had been supplied by the Soviet Union and even in 1929, when consumption reached 82,000 tons, 70 per cent was still coming from this source. But from 1933 onwards the distribution of oil over the whole country became a monopoly of the former Anglo-Iranian Oil Company. Prices were fixed on the Rumanian FOB Black Sea Rate and only slight discounts were given. Consumption increased rapidly until in 1941 it amounted to 270,000 tons



Production unit at Naft-i-Shah oil field

of different products. Annual production reached 10 million tons in 1937 and 1938, although it dropped to 9½ million tons the following year because of market disruptions and maritime dangers caused by World War II.

Two disruptions marred the steady growth of the oil industry in Iran in the inter-war period. The world-wide depression reduced the demand for oil and consequently the government's oil revenue dropped from 1,436,000 pounds in 1929 to 1,288,000 in 1930 and only 307,000 pounds the following year.
Secondly, there was growing

Secondly, there was growing dissatisfaction on the part of the Iranian government over the terms of the 1901 concession and the Armitage Smith Agreement of 1920. After nine years of disagreement, a new concession agreement was signed in April, 1933 between Iran and Sir John Cadman, Chairman of the APOC Board. The accord extended the oil company's rights for an additional 32 years (until 1993) but restricted the area to one quarter of the D'Arcy grant, which in 1938 was to be further restricted to 100,000 square miles. As a result APOC became the Anglo-Iranian Oil Company. A more certain and precise formula for calculating Iranian government revenues and a guaranteed minimum government earning of 975,000 pounds for the first 15 years, increasing to 1,050, 000 pounds for the next 15 years were established in the new agreement. The period 1933-39 was marked by the entrance into Iran of several new companies exploring for oil, the development of the Naft-i-Shah Zeloi and Gach Saran oil fields and expansion of the Abadan refinery. Oil production in this period increased as did prosperity, political stability and unity under Reza Shah.

### World War II

The declarations of war in September 1939 curtailed APOC expansion plans and necessitated the protection of oil fields from possible German sabotage. Due to the disruption in Europe caused by the war, annual oil production fell from over 10 million tons in 1938 to 9.5, 8.6 and 6.6 million tons in the three succeeding years. As a result, oil revenues fell from 3.3 million pounds in 1938 to 2.77 million pounds in 1939 which prompted the Iranian government to request an additional 1.5 million pounds for 1939 to insure that revenues compensate for production decreases and to provide a minimum government revenue of 4 million pounds per vear.

The Anglo-Soviet invasion of Iran in 1941 which led to the abdication of Reza Shah and the assumption to the throne of Mohammad Reza Pahlavi as the Shah of Iran resulted in the British reinforcement of strategic oil installations and the construction of roads, pipelines and storage facilities. Demand for Iranian oil increased rapidly in 1942 because of Japan's entry into the war and the loss of Allied oil resources in the Far East and Burma and with the preparation of the North African campaign in 1942. Production increased to nearly 9.5 million tons in 1942, to 13.25 million in 1944 and almost 17 million in 1945. The new fields of Agha Jari and Naft Safid were developed to meet the large demand.

### Post-War Production and Problems

As the table below indicates, oil production, refinery capacty and oil revenues rose steadily after World War II.

| OIL PRODUCTION                       |                                                                    |                                   |  |  |  |
|--------------------------------------|--------------------------------------------------------------------|-----------------------------------|--|--|--|
| <u>Year</u>                          | Metric Tons                                                        | Royalty Payments (Million Pounds) |  |  |  |
| 1946<br>1947<br>1948<br>1949<br>1950 | 19,190,000<br>20,195,000<br>24,871,000<br>26,807,000<br>31,750,000 | 7.1<br>7.1<br>9.1<br>13.5<br>16.0 |  |  |  |
| Refinery Capacity                    |                                                                    |                                   |  |  |  |
| 1947<br>1949<br>1950                 | 17,000,000<br>23,250,000<br>24,000,000                             |                                   |  |  |  |

The war and Soviet occupation of Azarbaijan until June 1946 aroused strong nationalistic sentiment in Iran. Agitation by the Tudeh Party in October 1947 caused the government to void the Soviet oil concession granted the previous year as part of the Soviet troop withdrawal agreement.

The Iranian government and the Anglo-Iranian Oil Company (AIOC) devised a new formula through which oil revenues could be obtained, entitled the Supplemental Agreement of 1949. The principle terms of the accord stated that the royalty would be raised from four to six shillings per ton of crude; 20 per cent of AIOC's general reserves would be paid annually to the Iranian government and that overall payments should not fall below four million pounds per year. However, the accord was attacked by Opposition Deputies in the Iranian Parliament (Majlis). The Oil Committee of the Majlis, working in great haste and unaided by anyone acquainted with the scale, conditions, or essential structure of the industry,

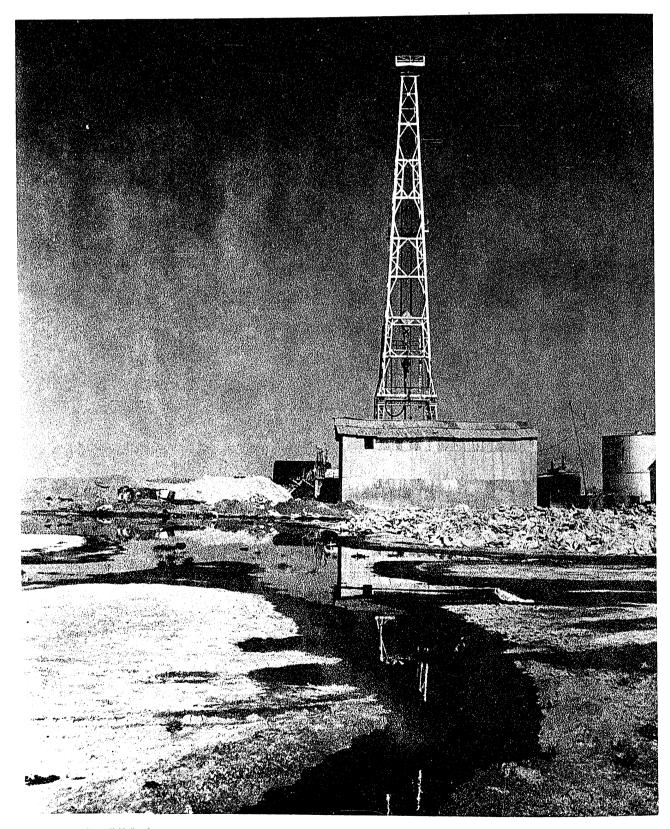
proffered a law which in nine clauses provided for the precise manner of nationalization and referred to the Anglo-Iranian as the "former Company" which was quoted with widespread enthusiasm.

Jan Sala

After the Nationalization Law of Mrach 1951 was approved by the Majlis, the National Iranian Oil Company (NIOC) was charged with the enormous responsibility of managing the southern oil industry. The oil companies and the Western countries refused to assist Iran in this undertaking. As a result, oil production came to a standstill and Iran was thrown in the midst of political and economic turmoil. However, with the restoration of public order brought about by a sense of national unity symbolized by the Shahanshah, negotiations between the oil companies and the Iranian government were resumed.

In October, 1954, a new agreement was concluded between Iran and a consortium of eight major oil companies five American, with 40 per cent interest, one BP with 40 per cent, one Royal Dutch with 14 per cent and one CFP with 6 per cent. Under this Agreement the Consortium was granted rights of exploration, drilling, refining and trans-portation in a specified area of southern Iran (approximately 100,000 square miles) called the Consortium Agreement Area. NIOC was recognized as the owner of the fixed assets in the Consortium Agreement Area, and the Consortium was granted the right to use them during the period of the Agreement.

It was agreed that two companies - the Iranian Oil Exploration and Producing Company and the Iranian Oil Refining Company (together called the



Alborz Well No.

Iranian Oil Operating Companies) should be established, the former to search for and produce oil in the Consortium Agreement Area and the latter to operate the Abadan Refinery. The NIOC was given the responsibility of safeguarding Iran's interests by ensuring that the Operating Companies complied with the terms of the Agreement and also the responsibility for providing supporting services in the Consortium Agreement Area. The accord also held that the NIOC should be paid a royalty of 12½ per cent of the posted price of crude oil exported from Iran, and the Iranian Government should receive 50 per cent of the resulting profits as income tax.

As a result of the Consortium Agreement, Iran's oil revenue was calculated on a new basis and the income per barrel increased 5 times over the previous amount. In the first year of full oil production after nationalization (March 1955-56), 24.6 million tons of crude were exported for which Iran received 55 million pounds.

As to the economic impact of the oil industry in this period, it should be noted that the Second Seven-Year Plan (1955-1962) was financed largely by oil revenues, the Plan Organization receiving about 60 per cent of the total oil revenues in the first two years and over 70 per cent in the remaining five.

In adopting the Petroleum Act of July, 1957, Iran pion-eered a new type of arrangement between oil producers and foreign companies based on the "75-25" principle of dividing profits in favor of the host government. (Fifty per cent of net profit was to be paid to the Iranian Government by

way of income tax and 50 per cent of the remaining net profit to go to the NIOC as a partner in the joint venture.) The law gave the NIOC responsibility for the development of oil resources in all parts of Iran outside the Consortium Agreement Area, including the Continental Shelf and encouraged the conclusion of partnership agreements between foreign companies and the NIOC.

The first joint company established in the autumn of 1957, the Societe Iran-Ital-ienne des Petroles (SIRIP) formed by the Italian AGIP Mineraria and NIOC, was allotted 23,000 sq. km. A second grant was made the following year to the Pan American Petroleum Corporation (a subsidiary of Standard Oil of Indiana) to explore offshore oil deposits. This was the most important joint venture to be undertaken.

# Organization of Petroleum Exporting Countries (OPEC)

The decade of 1960-70 saw the formation and emerging role of the Organization of Petroleum Exporting Countries (OPEC). The organization was conceived in Baghdad in 1960 and was formed in Caracas in January 1961. Iran was one of the five founders of OPEC, which now has 13 member states.

The OPEC headquarters and permanent secretariat were located in Geneva until 1965 and thereafter in Vienna. OPEC in the 1960's was successful in resisting any reduction in the "posted price" upon which the states' 50 per cent revenue was calculated. By the resolution of the Twenty-first OPEC Conference, held in Caracas in December 1970, the organization achieved its goal of the preceding decade, by succeeding in increasing prices after 10 years. The resolution,

which became known as the Tehran Oil Agreement of 1971, encompassing all the Middle Eastern countries, effectively resulted in a shift of "power" between the oil companies and producing states toward the major oil exporters and raised the posted price by 33%. Thus after a ten year lapse, OPEC achieved the goals and objectives which originally brought oil exporting states together.

The chief explanations for OPEC's success at the time was that demand for oil in the period 1967-70 had exceeded projections by 40% each year. In addition, coal production in

Western Europe had failed to meet its projected targets, nuclear energy had not made any substantial headway into the energy markets, and the North Sea expectations had not materialized. The damaging of the Trans-Arabian Pipeline (TAPLINE) in May 1970 and cutback in Libyan oil production in the same year also produced oil shortages in Europe of 500,000 barrels/day and strengthened the position of the major oil exporters.

A STANDARD OF COMME

and Karol Self le Stratege to the Color bearing

The table below shows the growth of Iranian oil production between 1955 (following the Consortium Agreement of 1954) and 1971 (Tehran Oil Agreement).

|   |              |                  |           |            |              |               | _ |
|---|--------------|------------------|-----------|------------|--------------|---------------|---|
|   | IRAN'S       | CRUDE P          | RODUCTION | AND        | OIL          | REVENUES      |   |
|   | Year         | Thousa<br>B/D Av |           |            | Rece<br>mill | eipts<br>ion) |   |
|   | 1055         |                  | -         | · <u>-</u> | 90.          |               |   |
|   | 1955<br>1956 | 328.9<br>541.8   |           |            | 150.         | <del>-</del>  |   |
|   | 1957         | 719.8            | 1         |            | 217.         |               |   |
|   | 1958<br>1959 | 826.1<br>928.2   |           |            | 247.<br>262. | _             |   |
|   | 1960         | 1067.7           |           |            | 285.         | •             |   |
|   | 1961         | 1202.2           |           |            | 292.         | •             |   |
|   | 1962         | 1334.5           |           |            | 342.         | -             |   |
| ١ | 1963<br>1964 | 1491.3<br>1710.7 |           |            | 380.<br>480. |               |   |
|   | 1965         | 1908.3           |           |            | 514          | - :           |   |
|   | 1966         | 2131.8           |           |            | 606.         | -             |   |
|   | 1967<br>1968 | 2603.2<br>2839.8 | ₹         |            | 751.<br>847. |               |   |
|   | 1969         | 3375.8           |           |            | 922          | • -           |   |
|   | 1970         | 3829.0           |           |            | 1104         |               |   |
|   | 1971         | 4539.5           | 0         | -          | 1966         | • 0           |   |
| 1 |              |                  |           |            |              |               |   |

The posted price of oil (originally set at \$2.17/barrel in 1947) dropped to approximately \$1.79/barrel in the period 1960-70 and only increased to \$2.27/barrel as a result of the Tehran Agreement. However, the growth in oil production, and increased refinery and petrochemical operations provided for a modest annual increase in oil revenues in this period and enabled the Iranian government to embark on an ambitious program of development through national planning.

In the years 1954-65 the Treasury's share of the oil revenues averaged 36 per cent, falling to 35%, 30% and 25% in 1963, 1964 and 1965 respectively. A portion of this money was spent on the repayment of debts and compensation to the former Anglo-Iranian Oil Company, and a part on capital and current expenses of various ministries and government organizations of Iran.

Each year the Plan Organization has received an average of over half the oil revenues. Its share rose to 65, 70 and 72 per cent respectively in 1963, 1964 and 1965. From 1949 to the end of 1966, the Plan Organization received a total of 840 million pounds from the oil revenues for development purposes.

The Second Seven-Year Plan was drawn up following the resumption of the oil revenues in 1955. The Plan Organization received about 60% of total oil revenues in the Plan period. The total planned investment was 414 million pounds; however, actual investments were 65 million pounds short of the target figure.

Of the 89 million pounds to be invested in agriculture, 65%

was allocated to irrigation, in particular to the construction of three large dams on the Karaj, Sefid-Rud and Dez Rivers. A number of smaller dams were also constructed. The remainder was devoted chiefly to seed improvement, fertilizers and insecticides

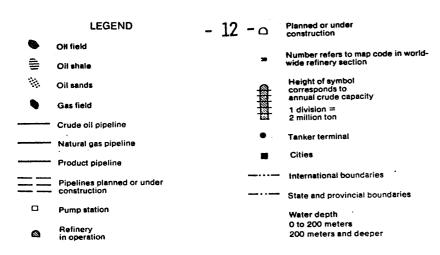
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In the period 1955-62, considerable progress was made both in the public and private sectors of industry. The government initiated a liberal, long-term credit policy for private investors, an Industrial Development Bank was established and the amount of loans totalled nearly 25 million pounds. Oil Consortium investment from 1955 to 1962 was 149.8 million pounds (including exploration and drilling) or about 21 million pounds per annum.

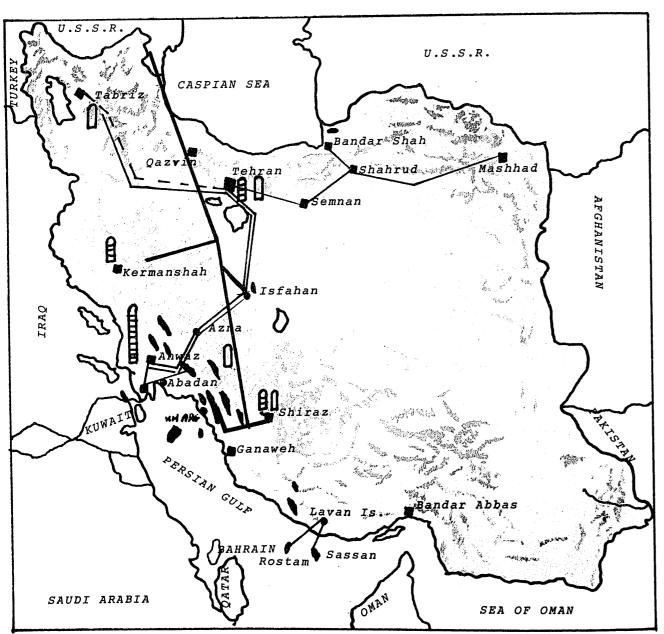
The Third Five-Year Plan (1962-67) was aimed at speeding up the development achieved under the preceding plans. This plan was limited to such projects as were beyond the capabilities of the private sector, the remainder being left to private enterprise working under the guidance of the Plan Organization.

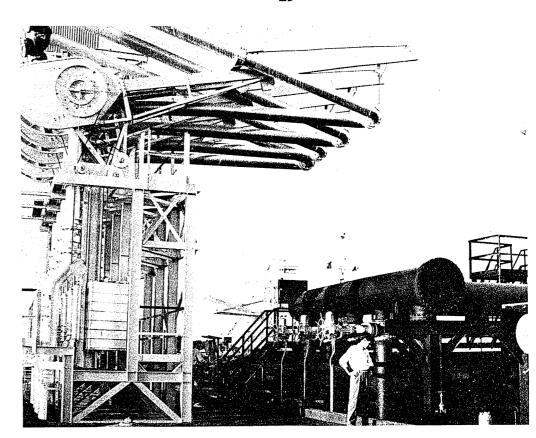
Of the 952 million pounds total development expenditure under this plan, it was estimated that a total equivalent of 638 million pounds or 67 per cent of Plan Organization's income during the period of the Plan would be provided by the oil industry alone.

About 55% of Iran's Fourth Development Plan (1968-73) was financed directly from oil revenues. The remaining \$4.8 billion (45.3 per cent) was attained through a combination of the private sector, foreign loans and foreign investment in Iran.



The second community light beautiful to





Loading facilities on Kharg Island

During the Fourth Plan, enormous effort went into developing the country's huge industrial and mineral resources through the planned channelling of revenues, thus changing a once agrarian economy to an industrialized one.

### The Period 1972-1974

This brief two-year period was characterized by dramatic changes in the Iranian oil industry and the price of oil.

The Geneva Agreement of January 1972, called for an immediate additional increase of 8.49% in the posted prices to compensate for the devaluation of the U.S. dollar, the specified currency for computation of the companies' payments. In May 1972, the international oil companies operating in Saudi Arabia, Kuwait, Iraq and Qatar agreed to

transfer a 51% interest to the host countries in stages, beginning with a 25% interest in January 1973. The Consortium of oil companies and Iran signed an agreement in May 1973, which yielded full control to the National Iran Oil Company (NIOC) but guaranteed access to Iranian crude at preferential terms for 20 years. The agreement, effective July 31, 1973 made the NIOC responsible for the management and control of oil reserves and for installations, exploration, extraction and refining activities. The Consortium (Iranian Oil Participants, Ltd.) was dissolved and its member companies formed a new Iranian corporation, the Oil Services Company of Iran (OSCO) to assist NIOC in operating the fields. As members of OSCO, they were guaranteed the right to purchase oil from the former Consortium area (now reduced by about 30%) for 20 years

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in proportion to their participation in the Consortium. NIOC was to receive enough oil to meet Iran's domestic needs, plus certain agreed amounts for export. Finally, in a "balancing margin" clause, the OSCO companies agreed to apply to Iran any privileges and advantages obtained by other Persian Gulf producing countries and to guarantee to Iran profits per barrel equal to those of the other states.

It was more than ever recognized by the Iranian government that because of the unique qualities of oil with its over 70,000 derivatives and its value as an exhaustible, efficient fuel, it could not continue to be sold at an artificially depressed price and that the cost of oil should reflect that of alternative energy sources. Moreover, the 1973 Arab-Israeli war and the ensuing oil embargo suddenly dramatized the value and inelasticity of oil, for which demand far exceeded supply. It should be noted, however, that Iran did not instigate or participate in the Arab oil embargo of 1973. The Shahanshah declared publicly that oil should not be used as a political weapon and accordingly, Iran rapidly increased its production during this period.

On October 16, 1973 Iran and the other five Persian Gulf members of OPEC announced a 70% increase in the posted price. Thus the posted price for Iranian crude rose from \$2.995 to \$5.091 per barrel and the government take from \$1.75 to \$3.02. On January 1, 1974, posted prices were raised an additional 130% which brought the posted price of Iranian light to \$11.875 per barrel and the government's take to more than \$7.00.

As other Persian Gulf countries raised their royalty rates, increasing their average per barrel income to \$9.74, the OSCO companies agreed to raise their payments to the Iranian government in accord with the balancing margin clause of the May, 1973 agreement. Effective October 1, 1973 the OPEC countries, including Iran, added another 3.5% increase to their take, bringing the total to \$9.74 per barrel.

His Imperial Majesty has always believed that the range of posted prices and multi-tiered oil price system was unwieldly and complex. Iran thus assumed the lead in advocating a single price mechanism for the oil producing nations. Consequently, in mid-December, 1974, OPEC adopted a uniform pricing system which established a posted price of \$10.46 per barrel for Arabian marker crude. The OPEC resolution raised the government take 4% (38c/barrel) to \$10.12 and effectively stabilized the price of OPEC oil for the first nine months of this year.

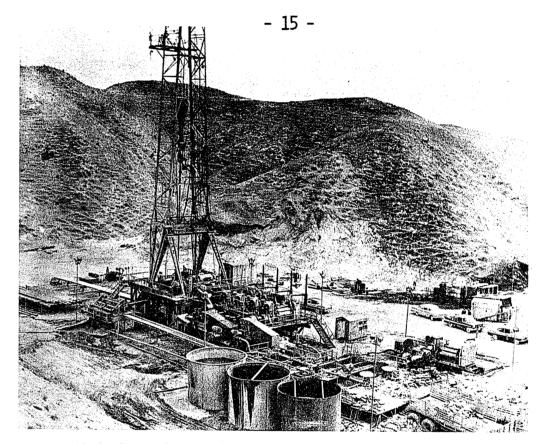
The chart below clearly illustrates the rapid increase in Iranian oil produciton and revenues in the last two years.

### OIL PRODUCTION 1972-74

| Year | Av. Daily Production (1000 barrels | Oil Receipts<br>(\$million) |
|------|------------------------------------|-----------------------------|
| 1972 | 5.023.1                            | 2.396                       |

1972 5,023.1 2,396 1973 5,860.9 5,000 1974 6,150.0 21,000\* \*Estimate

The rapid growth in oil exports necessitated the expansion of pipelines and port facilities in Iran to efficiently market oil. This rapid growth involved a phenomenal expansion and modernization program. Kharg Island, some 23



An Iranian oil exploration and producing compa drilling rig at Gachsaran in southern Iran

miles off the mainland, was linked by a series of pipelines to the Agha Jari, Gachsaran and Bibi Hakimeh oil fields, to become the world's largest oil loading terminal, capable of handling ten super-tankers, five of them in the 100,000 tons class. In 1972 an artificial island was inaugurated in deeper water further off-shore, where tankers up to 500,000 tons are able to load. A new project named Kharg V, is under way to increase the loading capacity of the Kharg Terminal. When this project is completed (probably by October 1975) Kharg will be able to accomodate more tankers of between 300,000 and 500,000 tons.

A result of the oil price increases was a wholesale revision of Iran's Fifth Development Plan (1973-78). Approximately 80% of the total \$123 billion expenditure in this plan (over \$98 billion) will be fin-

anced from oil revenues which doubles the scope of the original 1973-78 Plan and is seven times larger than the Fourth Plan.

In addition, Iran has assumed the role of a creditor nation, earmarking over \$8 billion to aid other countries, both developed and developing, and international financial organizations. This figure represents nearly 7% of the nation's GNP which is unprecedented in contemporary history. Thus, while pursuing a goal of national development, Iran is striving to assist the world community in meeting its financial commitments.

### Oil Refineries in Iran

There are currently five oil refineries operating in Iran with a maximum capacity of 625,000 barrels/day. Beginning in 1954, the NIOC actively supported the construction and

expansion of oil refineries in Iran by acquiring the Kermanshah refinery. This refinery, built in 1935 includes a solutizer plant, electrically driven pumps and forced draught burners as well as storage and loading facilities. The growing demand for oil in northern and central Iran combined with the high cost of transporting fuel oil by rail from the oil producing regions of southern Iran necessitated the construction of a refinery near Tehran. On May 21, 1968, Their Imperial Majesties inaugurated the refinery, which contained nine major process units and seven treaters plus power, steam and water services.

Construction of the second Tehran Refinery with a capacity of 100,000 b/d, is nearing completion. It was begun in March 1973 and will cost approximately 10 billion rials. Crude oil for the refinery will be supplied through a second Ahwaz-Tehran pipeline. This pipeline, which has been constructed to feed Tehran, Tabriz and other projected refineries, is 735 kilometers long, and includes 228 kms of 30-inch diameter pipe and 507 kms of 26-inch pipe. The expansion of the capacity of the first Tehran Refinery to 125,000 b/d is under way and will soon be completed.

Under the terms of the May 1973 agreement the NIOC acquired the Consortium's huge refinery at Abadan which has a capacity of 460,000 b/d and is the largset oil refinery in the world.

The Fars Refinery near Shiraz was constructed to meet the increasing demand for oil products in southern and eastern Iran. There is also a topping plant at Masjid-i-Sulaiman.

According to official figures recently released, the total output of Iran's oil refineries

in May 1975 was 18,959,362 barrels. Of this amount, Abadan refinery produced 12,664,576 barrels and the rest was refined in Tehran (4,777,808 barrels), Shiraz (872,704 barrels), Kermanshah (392,140 barrels) and Masjid-i-Sulaiman topping plant (252,134 barrels). The average output in the reported month was 677,120 barrels per day, an increase of more than 48,8000 barrels over the January figure of 628,245 barrels.

In addition, preparations have been made for the construction of refineries in Tabriz and Isfahan. The contract for the construction of the Tabriz refinery was signed on March 10, 1973 and construction is expected to be completed by the winter of 1976. Plans have also been made for the construction of a 200,000 b/d refinery in Isfahan.

In order to achieve its goal of becoming the world's largest oil company, NIOC has concluded a number of refining deals a abroad. It has a minority interest in a 50,000 b/d refinery at Madras, which it also supplies with crude oil and another such arrangement has been made with South Africa. A number of barter deals have also been concluded with Eastern European countries. In May of this year, the National Iranian Oil Company and South Korea's Ssangyong Group reached agreement in Seoul on the establishment of a joint refinery in South Korea, with a capacity of 100,000 barrels per day.

In mid-June, Costan Rican Foreign Minister Gonzalo Facio announced that Iran will finance an oil refinery in that country, although the size of the loan has not yet been disclosed.

### Oil Production Today

Although it is estimated that

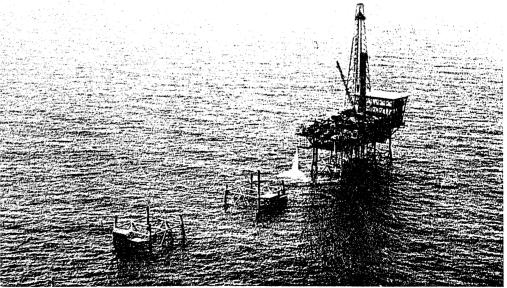
Iran's proven oil reserves are one-tenth of the world's total. about 60 billion barrels with 15 to 20 per cent more in the form of secondary reserves, the Iranian government clearly recognizes that its oil resources are not renewable and that one day they will be exhausted. Under the enlightened guidance and direction of the Shahanshah, Iran has endeavored to develop an industrial base, an efficient agricultural plan and a modernized infrastructure upon which the nation's future wealth will be determined. Iran has contracted with French and American firms to construct a series of nuclear power plants to assure adequate energy supplies for future generations. The Shahanshah has urged the industrialized countries to curb waste in oil consumption and to develop alternative energy sources in order to conserve the world's oil supply. The government of Iran strongly favors a constructive dialogue between oil consumers and producers in order to foster a greater understanding and agreement over the oil price issue and provide greater aid to developing countries.

Diminished oil consumption by the Western nations has

forced Iran to cut production by 15% since January to a current average daily output of 5.1 million barrels. This figure is contrasted with an average daily output of over 6 million barrels in 1974.

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In conclusion, after reviewing the history of the oil industry in Iran it should be noted that the international industry's pattern and much of its behavior today are the results of its past. The reader should keep in mind that the changes that took place in the Iranian oil industry between 1901-1971, were by no means initiated by the major oil companies. The changes that took place were reactions to unjustified economic discriminations by the oil companies in Iran. Renegotiations of agreements; nationalization; a national petroleum act; joint ventures; service contracts and the direct operation of the industry by the State were brought about as a result of an ever-increasing awareness in Iran of a continuously widening gap between oil company profits and the diminishing national receipts as well as a blatant disregard for the optimal value of oil as a finite source of energy.



Offshore drilling platform in Persian Gulf

### AN INSIGHT INTO IRAN'S OIL POLICY

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Iran, as one of the original members of the Organization of Petroleum Exporting Countries (OPEC), has reason to be concerned with the exaggerated attention which the West and its mass media have been focusing on the price of crude petroleum. Not a day passes without one of the major organs of the media of the industrialised world carrying an article or editorial concerning oil prices and/or OPEC.

The price of oil has been blamed for the continuing inflation and recession in the industrialised world. Some have charged that the price of oil will retard the already low growth rates of some of the world's lesser developed nations. The aura of panic surrounding the price of oil also generated anxiety in the western world that the huge transfer of currency to the oil producing nations would precipitate a severe crisis in the international monetary system.

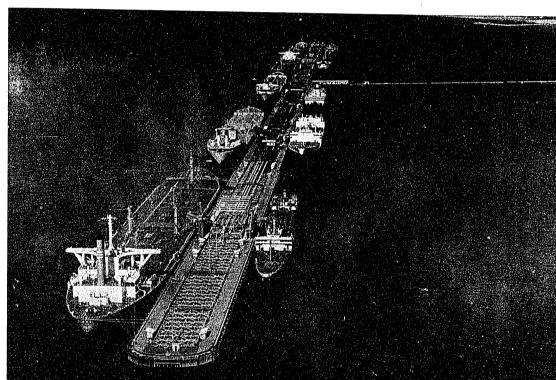
The price of oil has thus become the "bete noire" of the industrialised world. The implication seems to be that if only OPEC would lower its prices, the economies of the western world would regain their expansionary momentum.

Before each of these allegations are answered, it should be made clear that while Iran is steadfast in its determination to achieve an equitable return on the value of its precious natural resource, it has adopted a generous attitude and done more than its share towards alleviating the possible hardships that the increased price of crude oil might pose for its neighbours and friends among the lesser developed nations.

His Imperial Majesty has repeatedly stated that the widening gap between rich and poor nations poses a serious threat to the security of the world and that it is the moral responsibility of those who can to take steps to bridge this gulf. With this view Iran has concluded a number of bilateral aid agreements with the developing nations of the world. In his Majesty's own words:

"Our aid to India will be, I think, in the order of one billion dollars; we have extended nearly the same amount to Pakistan. Our aid to Egypt is perhaps a little over one billion dollars, to Syria 150 million dollars. I cannot give a precise figure for Sudan, but we will do whatever we can. With regard to countries which have complete confidence in us, such as Tunisia, Morocco, Senegal, Zaire and perhaps other African countries, our bilateral aids will exceed three billion dollars. This is an extraordinary assistance when the 32 million population of our country is taken into

(To this should also be added nearly 700 million to 1 billion dollars in financial assistance to Afghanistan, according to a recent protocol signed between Iran and Afghanistan.)



tharg Island export terminal capable of berthing 10 oil tankers of up to 500,000 tons.

"We have proposed to the United Nations the creation of a new international institution where, for instance, the oilproducing countries will be represented, the most advanced and wealthy industrial countries of the world will be represented too: 12 of the oil producing countries, 12 industrial countries and also 12 representatives of the developing countries, all of them on a board with equal voting rights. They will take advantage of the banking services of the World Bank and the International Monetary Fund in order to raise first about \$2.5 to \$3 billion per year for three to five consecutive years and then lend easy-term money, for instance 25 to 30 years period, for 2½ per cent interest rate to countries whose projects will be ratified by this 36-member board. So, the increase in the price of oil, although we have to pay so

much more for all the commodities that we need - but still we are thinking of the less developed or developing countries and the needy ones."

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In fact, aid commitments from the Middle East oil producing states to other developing countries topped \$8,000 million during the first nine months of 1974, only some 17 per cent below the total official development assistance of \$9,400 million committed by the world's 17 richest industrialised states. This represented more than three per cent of the combined Gross National Products of the Middle East states concerned. In this connection, it should be emphasized that Iran has already earmarked \$8 billion, or 7% of its GNP to aid and assistance to developing and developed countries as well as to international organizations, a sum far higher in ratio to its GNP than all the OECD countries.

Yet the major industrialised states of Western Europe, North America and Australasia with only 18% of the world's population, between them accounting for 70 per cent of world trade and consuming three-quarters of the world's protein intake, committed the equivalent of only 0.30 per cent of their GNP to development assistance. This is an extremely small commitment considering their total GNP.

The anxiety over the effect of "petrodollars" on the world monetary system has proved to be unfounded. The massive disruptions predicted have not occurred and the OPEC nations have prepared methods by which to safeguard the monetary system. What is surprising is that the OPEC members have been blamed for creating instability in a system that has not known stability in the last seven or eight years. The devaluation of both U.S. dollars and British pound sterling occurred well before oil became the pariah of the industrial world. The dollar had already weakened before the October 1973 war; the Smithsonian agreements had already broken down and become inoperative as early as 1971.

It should also be pointed out that the effects of the monetary system are not borne exclusively by the industrialised nations. The OPEC members are a part of that system and recognizing that, have neither taken nor intend to take any deliberate action aimed at disrupting it.

In addition, one need not have a long memory to recall that the price of oil was not always the focal point for an anger and anxiety over a constantly rising price level. Economists have long argued over the causes of inflation. Inflation was seen as being endemic to the economic sys-

tem of the United States with its strong and large labor unions and corporations. The inflation was seen as being a natural result of the economic expansion which had been fostered during the Johnson administration and which had manifested itself in that administration by large spending programs and expansionary fiscal policy - the war on poverty, the model cities program and other programs designed to build "the Great Society" as well as the successful investment tax credit and accelerated depreciation allowances designed to expand America's productive capacity. Late in the Johnson administration, concern began to be voiced also about the "overheating" of the economy. At that time, the Vietnam war received a great deal of attention. Economists maintained that the inflation was of the "demand-pull" type and that there were "too many dollars competing for too few goods." The Johnson administration 10% tax surcharge resulted. Earlier in the Johnson administration, the inflation had been diagnosed as being of the "cost-push" type, wages and prices outstripping productivity gains and resulting in higher prices to the consumer. The Johnson administration Wage-Price guidelines resulted. The Nixon administration also was faced with the problem of inflation and the programs known as Phase I, II and III resulted. Prices of domestic agricultural goods and products continued to increase and consumers began organizing in efforts to "do something" about rising prices. This was perhaps climaxed in the national meat boycott in protest of increasingly higher meat prices. One need only look at the records of the media during this period to conclude that a new post-

World War II phenomena was being blamed for the economic ills of the industrialised world - namely, rising inflation with rising unemployment.

The Nixon administration's grain agreement with the Soviet Union was singled out by some members of the media as one of the causes for existing economic problems. Some economists maintained that there was too much money in the system and that credit had to be tightened; others argued for a tax increase. Other economists blamed "structural bottlenecks" within the system for creating inflation in areas which was thereby transmitted to the rest of the economy. This was the scenario from 1966 to 1973. The price of light Iranian crude in that period had gone from \$1.79 / barrel (42 gallons) to \$5.25/ barrel in 1973 - roughly a tripling of prices. This did not result in the price of oil being singled out as the root cause of inflation within the United States. Rarely was an accusing finger pointed at

The October War between the Arab states and Israel brought with it the oil embargo by the Arab members of OPEC, an embargo in which Iran did not participate. One may note this as the starting point of the media's focus of attention on oil and oil prices and their "effect" on the U.S. economy. The issue of oil prices became more of a political issue than one of economics. The American public was made to feel that oil was in short supply and that shipments from the Middle East had ceased. The media was filled with pictures of angry motorists forced to wait hours for gasoline, of

gas stations with closed signs, of reports for mandatory gas rationing proposals, of "necessary" price increases by the oil majors. All of these occurrences were blamed on the oil "embargo." However, as His Imperial Majesty, the Shahanshah said to Mike Wallace on CBS's "Sixty Minutes":

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"I don't know why you attach so much importance to this embargo in the United States, really. Why should you care about that? You are not short of oil."

"... you have imported more oil than any time in the past."

"You know that ships are changing their destinations more than two or three times in the oceans. You sell the oil for a certain destination, and it ends up somewhere else."

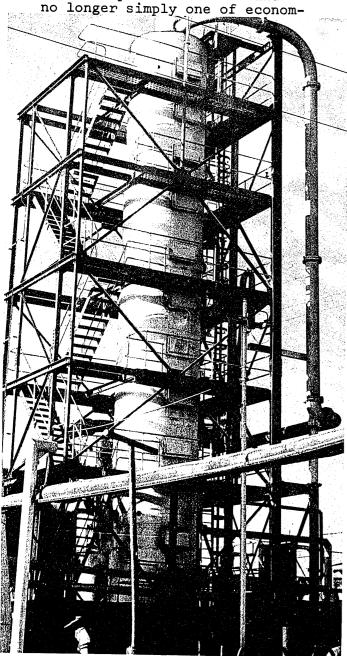
In reply, Wallace asked:
"What you seem to be saying
is that there is some fraud
involved, that there is something going on that doesn't
meet the eye," and His Imperial
Majesty answered: "Oh, something is going on for sure."

This statement of His Imperial Majesty was given some attention by the media and some congressmen and senators voiced the opinion that investigation should be made about the truth concerning oil shipments to the United States. Needless to say, recent events have finally substantiated the veracity of the Shahanshah's earlier views.

However, after the embargo was lifted and oil shipments resumed, the onus for America's ills continued to be placed on oil. The attention once riveted

to a factor external to the U.S. economy was not about to be changed.

Americans began to become acquainted with the growing role of OPEC and to associate all of the economic problems of the previous seven years with it. Thus, the inflation became a political issue and



ics. The price of oil became synonymous with the cause for inflation in the industrialised world. Phases I, II and III exited from the national stage

Thus, when Iran, along with the other OPEC members doubled the posted price of its light crude in early 1974 to over \$11, the action was widely decried as an effort on the part of the oil exporters to "exploit" the industrialised nations need for imported oil. Iran, as well as other OPEC members, was accused of precipitating and exacerbating the inflation in the United States. Numerous actions were taken to try to "destroy" the "power of the OPEC cartel." The "invasion of the petrodollars" was forecast; the oil producers were cast in the light of having the power to force a worldwide monetary crisis - the implication being that this might be their intention. Legislation was prepared to restrict foreign investment within the United States - something which had never been considered before. (The attack on oil prices and on the leaders of oil producing nations was renewed after His Imperial Majesty suggested that the continuing inflation in the West might result in some action on the part of the OPEC members to maintain their hard-gained purchasing power.)

The fact that oil imports from the Middle East only instituted 10% of the 40% oil dependency of the United States on oil supplies from abroad was completely overlooked. The fact that increased oil prices according to U.N. estimates as well as documented views expressed by leading economists represented a one to two per cent differential on the West's inflationary problems did not appease those who sought a scapegoat for their economic difficulties.

## II

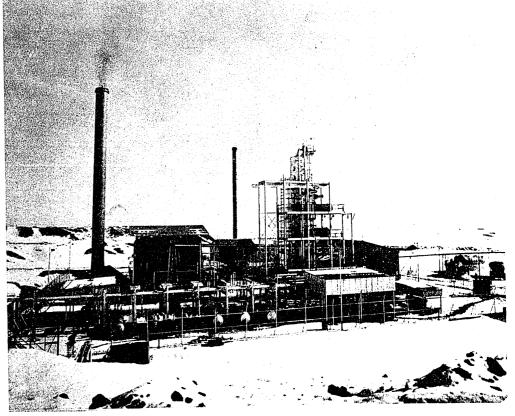
Both consumers and producers speak of a "just price" for oil. The fact that the differences in what this price should be are at such variance can be easily explained. The variance arises from the two different concepts of "price" which each group has. Consumers have called for marginal cost pricing for oil - one based on its cost of production. Iran has called for a price for oil which would reflect its true "opportunity cost."

Economists long ago determined the concept of "optimal price." This would be a price based on the cost of producing a particular product. The "optimal price" would be determined by the interaction between production and consumption - supply and demand and would be a price which equated the incremental cost

of producing an additional good, i.e. its marginal cost, with the incremental satis-faction gained from the consumption of that unit. Here the cost and benefit of that good would be equated and "society" would be in the best of all possible positions - just paying a price for a good that the good is "worth."

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In this regard, His Imperial Majesty has repeatedly stated that what Iran seeks for its crude is an optimal price based on the notion of opportunity cost. In general, the opportunity cost and marginal cost of producing a commodity would be equal. This has not applied since the price of oil has heretofore been kept artificially low by the monopoly power of oil companies. This suppressed price was set without due regard for the optimal



Alborz topping plant in north Ira

rate that oil as a depletable resource should have been consumed.

The optimal price of oil thus defined should be calculated on the basis of the price of substitutes and on alternative uses for petroleum. This is an economically sound principle but one which has not been adhered to in the past. Economists agree that the price for a good should reflect the cost of the foregone use of the materials consumed in some other production process. It should also be related to the price of available substitutes. It has been calculated that the cost of alternative sources of energy equivalent to one barrel of crude would cost between \$10 and \$16. Also, the foregone uses of petroleum, that is its"opportunity cost" for other purposes must be taken into consideration. The price of crude would then reflect the cost to consumers of their decision to burn crude oil rather than using for its petrochemical properties, for example. The fact that oil has greater value when it is used for its petrochemical properties rather than as a fuel is something which has been overlooked in the past. If consumers choose to continue to burn oil rather than use it for its petrochemical value, they must be prepared to bear the cost that this decision entails. Because the value of their action does not correspond to the value of the product is not the fault of the producers. The act of burning oil has for too long been priced below its true cost. The cost of this was the derivatives of oil that were foregone and the luxury of not having to develop more expensive alternative sources of energy coal, solar, geothermal, nuclear.

The producers are no longer willing to finance this divergence between the true value of their resource and the market value so long attached to it by consumers. Here, one should not forget that only until very recently the monopoly of the major oil companies in setting arbitrarily the price of oil at an outrageously low level resulted in the price of oil bearing no relationship to the opportunity cost of alternative sources of energy. This enabled the world to fall prey to the mistaken belief that oil as a source of fuel was going to remain cheap.

It should be pointed out that not only did the price of oil decline in nominal terms from \$2.17 in 1947 to \$1.79 in 1971, but that taking into consideration inflation in the West during this period, the price of oil in real terms declined dramatically.

Notwithstanding an analytical appraisal of what constitutes a "fair price" for crude, the media has pressed forward with its attac $\bar{k}$  on the OPEC price structure. A more graphic reply to these attacks might be made by examining the price changes of oil with regard to the price changes for certain of Iran's imports over the period 1966-1975. Mention might be made that the price of oil is usually quoted on a per barrel basis rather than on a metric ton basis as is used for other commodities. Thus, a factor of 7.3 must be used to convert the price per barrel of Iranian light crude to the price per metric ton.

In 1966, Iran paid, on the average, \$55.00 per ton for raw sugar. During the first five months of 1975, Iran has paid \$934.92 per ton which is up from \$540.22 per ton for

1974. In 1966, Iran paid \$234.64 per ton for paper and paperboard products. By 1974 the price had risen to \$499.07 per ton. In 1966, Iran paid \$275.96 per ton for vegetable oil. During the first five months of 1975, Iran has paid \$732.27 per ton. Finally, in 1966 Iran paid an average of \$67.80 per ton for wheat. In 1974, Iran paid \$228.32 per ton for wheat. These prices do not take into account that during the years 1966-73 prices for the above commodities had reached much higher levels. For example, the price of sugar at one stage had exceeded \$1000 per ton.

What is of interest is that while the price of these goods, goods which all consumers use whether in Iran or in the United States, has risen dramatically in each case, little has been said about the increased burden this has posed not only for the oil producing and developing countries, but also for the industrialised nations. In order to control this problem, the prices of these commodities are all subsidized by the Iranian government.

The manner in which they are subsidized is through revenues taken in by the Iranian government. The major source of this revenue is the income received by Iran for its crude oil. The prices received per barrel for Iranian light crude since 1948 are listed below:

| Iranian Light        | Crude                        | 0i: |
|----------------------|------------------------------|-----|
| 1970<br>1971<br>1972 | \$<br>1.79<br>2.274<br>2.467 |     |
| 1973<br>1974         | 5.254<br>11.875<br>10.46     |     |

1948 - 2.17

1960 - 1.79

\$1.79 up to 1970

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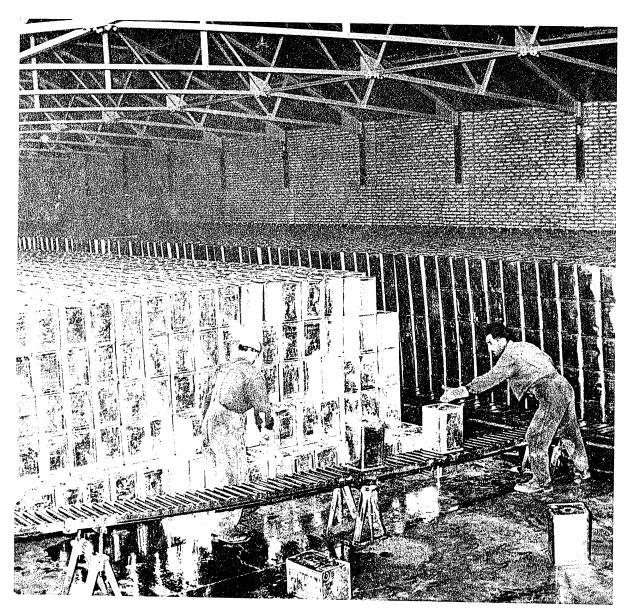
Another factor that must be considered when comparing oil with these imports is that while oil, as His Imperial Majesty has repeatedly stated, is not a renewable commodity, these other goods are. That is, each ton of sugar, wheat, vegetable oil, paper consumed can be replaced with each new harvest. Each barrel of oil consumed is forever gone - a point which the United States has long recognized in dealing with its own oil industry and allowing then an "oil depletion allowance" on their taxes. This becomes more evident when one considers that on the basis of the most optimistic forecast, if present consumption trends continue unchecked, the world would witness the end of the petroleum era by the early part of the twenty-first century. This would prove calamitous for mankind considering that there are no swift and cheap ways of replacing oil as a source of energy within this period.

Furthermore, the precious feature of oil as a hydrocarbon resource becomes more apparent when one reflects that even in the United States with the most advanced methods, the recovery of only 30-35% of proven reserves and oil formations is possible. This fact is made worse when one takes into account that much of the crude oil ends up generating power with less than 30 per cent efficiency, meaning that for each 100 barrels of subsurface oil, only about 7 to 10 barrels are effectively

used. This waste of oil as a finite energy is is symbolic of the irreparable damage caused by the misuse and misevaluation of the world's foremost hydrocarbon resource.

This is the reason why His Imperial Majesty has said that Iran's oil resources under current trends and without the existence or production of

alternative sources of energy will be depleted within 30 years. Faced with this fact and with the goals of the Revolution of the Shah and the People, Iran is steadfastly determined to maximize the revenue and use that is to be gained from the sale of its life's blood.



Can-filling plant at Kermanshah Refinery

# III

In spite of these facts, it has been charged that OPEC is a cartel which dictates prices rather than accepts the market determined price arrived at by the interaction of supply and demand. It is further charged that the oil nations are curtailing production in order to keep the price of oil "artificially" high.

During the years before the formation of OPEC, when the international oil companies based in the United States and in Europe dominated the world petroleum market, there seemed to be little concern outside of the producing nations over the price of crude. The supply and price were completely under the control of these companies. It was they who would dictate to the producers how much and at what price their oil would sell. When a price reduction was desired, they would in-voke the "sacred" concepts of "supply and demand." The companies' primary interest was concerned only with maximizing the return on their investments. The need for the restructuring of this relationship between consumers and producers was the reason for the formation of OPEC and the wresting of control over the wealth of the oil nations from foreign directive. The OPEC nations, while concerned with the needs of the industrialised world have as a primary concern the standard of living and well-being of the people of their own nations.

When examining the price structure and demands of OPEC, one must keep this over-riding consideration in mind. The OPEC nations wish to attain a "fair or optimal" price for their resources as this re-

source holds the key to the fate of their present and future populations.

Iran is in the process of building a modern technological infrastructure that will sustain its industrial growth long after its oil resources are gone. One would be hard put to hazard a guess at the cost of building the U.S. commercial infrastructure over the last one hundred years. Iran's oil revenues, unlike revenue from sales of commodities to Iran, do not accrue to individuals or corporations. It is the wealth of the nation, of all Iranians. It is not distributed among stockholders or retained in company profits. It does not finance luxury consumption of individuals. Iran's program of modernisation began in 1963 with His Imperial Majesty's 26th Bahman proclamation. Since then, Iran has been modernising at an increasing rate. Revenue is needed to finance educational programs, agricultural programs, urbanization programs, housing programs, electrification programs, communications systems, rapid transit systems, medical programs. The fact that oil prices have risen so drastically in comparison to other commodities reflects the necessity of changing the relative price structure that has existed between the industrialised nations and the rest of the world. If the industrialised nations have been sincere in their statements of concern over the economic plight of the near-industrialised world, if all of their aid and assistance programs have been designed and implemented to better the living standards of the less fortunate on the earth, if their concern over the growing gap between rich and poor has been genuine, then they must understand that a maintenance of the status quo between prices for

commodities largely arbitrated by their dominance of the international market can only perpetuate a system that the world has judged unjust. How can the nations of the non-industrialised world hope to improve their position vis a vis the world's wealth if they refrain from effectuating a change in today's economic order as well as demanding a dramatic improvement in the world's relative price structure. They must move faster to catch up and the price increases reflect this fact of development.

As pointed out, these revenues serve as the seed for the further growth of a nascent economy. They are the the basis from which Iran will generate a new life for its citizenry. The programs which have been instituted in Iran must be nurtured through their nascency until they can stand on their own. This nourishment has been and will continue to be derived from Iran's oil revenue.

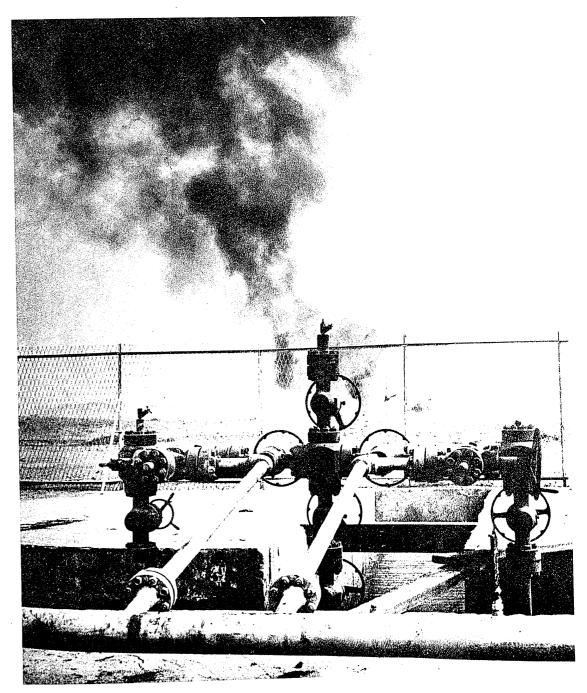
The notion that oil prices should be governed by market forces of "supply and demand" is one which is relatively new to the international petroleum scene. Before the  $197\bar{1}$  OPEC meeting, the law of "supply and demand" which appeared to hold, seemed to be that the oil producers should "supply" oil at the price "demanded" by the industrial world. Supply and demand has never been an issue in the price of other commodities. Optimal pricing was never a reason for concern before oil price increases. But suddenly, these issues are being raised and the oil producers are being asked to price oil according to factors that do not exist in this or any other market. When U.S. farmers control the supply of crops to maintain high prices, when cattlemen destroy beef rather than send

it to market and lower prices where are the forces of "supply and demand?" The cost of the production of oil does not reflect its value. The cost of alternatives to it is the major factor. If the cost of oil were prohibitive, it would spur the development of substitutes. This is a basic tenet of "free market" economics. His Imperial Majesty has urged that alternatives to the use of petroleum as a fuel be found for it is his belief that the petrochemical value of oil far outweighs its value as a fossil fuel. This is also reflected in the price of oil. The price of oil may very well be set by the desire of OPEC to exercise its lawful interests by demanding that the price of oil correspond to its opportunity cost. It is therefore not determined arbitrarily.

The industrialised world must face up to the real value of oil. Oil as a commodity can not be simply evaluated in isolation and be made into the "bete noir" of western economics. Oil represents different things to its producers and consumers. For the consumers it represents the maintenance of a standard of living that was promised them through the Depression and second World War. It represents the foundation of the consumer society that has sprung from the post-war world. However, we should remember that this world was built on a foundation that was not equitable and just. A re-appraisal is now taking place. The producers see oil as the route to their goal of development, to the achievement of some measure of the enormous technological and social progress they have witnessed in the industrialised world and a source by which they can maintain as well as increase their purchasing power. They

are views which must be respected and accomodated. The consumers must realize that the dreams and aspirations of people who live in far away places can no longer be sacrificed so that the easy life of the industrialised world can continue unabated

and unchanged. The world has changed and a new dialogue together with a new economic order based on equity and mutual interest among old partners must be fashioned if reciprocal understanding is to be achieved.



Productive oil well in Iran

# TURKISH PRESIDENT ON STATE VISIT TO IRAN



Their Imperial Majesties greet the President of Turkey and Mrs. Koruturk

In his first state visit abroad, Turkish President Koruturk traveled to Iran to confer with the Shahanshah on a variety of matters of mutual interest. President Koruturk was accompanied on the 5-day visit by his wife and an entourage of 20 top government officials and experts.

In a series of meetings between Mr. Koruturk and the Shahanshah, Irano-Turkish solidarity and the broad-based economic, political and defense cooperation were stressed by the two leaders in the framework of the extensive cultural and historical ties between the

two countries. The principle topics of discussion were the Middle East, the Cyprus dispute, the Regional Cooperation for Development (RCD) and the Central Treaty Organization (CENTO).

A joint communique issued at the end of the visit said that the economic and technical cooperation agreement signed between the two countries last week heralded a new order of cooperative relations in such diverse fields as transit transport, agro-industry, commodity exchange, tourism, banking, insurance, industry, mining, energy, financing and defense industries.

As noted in the communique, the Shahanshah and President Koruturk had "a close similarity of views on many regional and international issues."

Both Iran and Turkey, as members of CENTO and RCD, had made "a great contribution to the stability of the region as well as to world peace."

The communique said that the Shahanshah in his talks with the President stressed "the vital importance of the Persian Gulf and the Strait of Hormuz for the security and economic well-being of Iran and other littoral states."

Both parties affirmed security of the maritime trade routes "can best be maintained through the cooperation of the littoral states without any outside interference."

On the Cyprus problem, the communique said the two sides expressed the hope that the talks between the leaders of the Turkish and Greek communities would culminate in a just and final solution based on "a geographical federation, acceptable to both communities."

The two leaders, while expressing their concern about the Middle East crisis, called for the prompt implementation of the Security Council resolutions 242 and 338 and they called for the withdrawal of Israeli forces from occupied Arab lands while extending their support to the Arab people for "the restoration of the Palestinian people's just and legitimate rights."

The two leaders also said that the Iran-Iraq accord would contribute to the region's stability and peace. They welcomed steps taken for the restoration of a lasting peace in the Subcontinent.

A new Irano-Turkish economic cooperation agreement was signed during this State visit. The Shahanshah characterized the accord as "a positive step, a reciprocal move benefitting both countries."

All of

President Koruturk expressed "deep pleasure" at the conclusion of the agreement and hoped that it would mark the beginning of increasing expansion in the two neighbors' mutually beneficial cooperations. He said that Turkey had presented Iran a list of its major development projects which required foreign financing "to seek possibilities of cooperation in this area."

Close cooperation, the agreement said, would be undertaken in agro-industry and agro-business including "long-term commodity arrangements." Cooperation in this field, will among other things help meet the two nations' rising demand for agricultural products.

"The parties, determined to establish close and wide economic collaboration..., considered the question of a joint defense industry and accordingly decided to undertake the necessary studies to that end," the accord said.

Their Imperial Majesties have accepted President Koruturk's invitation for a State visit to Turkey at a date yet to be determined.

RECENT CULTURAL AND EDUCATIONAL ACTIVITIES OF HER IMPERIAL MAJESTY THE SHAHBANOU OF IRAN



Her Imperial Majesty Empress Parah Pahlavi

On June 14th Her Imperial Majesty Empress Farah received an honorary Doctor of Law degree from the American University of Washington, D.C. The degree was conferred at a private ceremony in Tehran by Dr. George H. Williams, President of the University. The honorary degree, one of only two honorary degrees bestowed by American University since 1969, was in recognition of Her Majesty's work in Iran.

In her acceptance address,

Her Imperial Majesty said in part:

"The main purpose of our economic development is to achieve higher standards of living for all the people. Our plans encompass material development as well as the idea of political and social maturation. They also include the attainment of mass education, the burgeoning of the arts and architecture, the growth of means of communication and the enrichment of leisure. That is

why, together with our land reform, we have tried to introduce education, health and training into the most remote rural areas, by launching the successful Education, Health and Development Corps. In our plans and policies we have naturally placed particular emphasis on a more equitable distribution of income and wealth among workers both in industry and agriculture on issues of particular concern to the rural population, to lower income city dwellers, to women and to the younger generation. At the core of our revolution lies the principle of the participation of all Iranians in the common effort aware of our responsibilities to humanity as a whole. Our help to other nations amounted last year to 7 per cent of our GNP, a figure no other nation in the world can claim. But it is obvious that due to our national needs we cannot continue this contribution alone. Other nations and particularly the industrialized countries should increase their foreign aid. In a world becoming every day more interrelated, the pursuit of egotistic goals is impossible. Neither can we afford the simplicity of dealing with one problem at a time. We can not continue to live apart from others, each in our dreamland. We must become active in the international arena in order to debate and decide what the priorities of our new world should be. We have to work and cooperate with one another to find solutions to the issues of our time."

### Conference

In mid-June the first regional "Habitat" Conference, in which 26 countries participated, opened in Tehran.

In keeping with the theme of the conference, which was organized to identify population and urbanization problems facing Asian countries today, Her Imperial Majesty said that the world now needs about six million new housing units annually to keep pace with the rapidly growing global population.

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In a message to the Asian Habitat Conference, the Shahbanou stressed that the industrialized world with its accelerating industrial development, consumes a far greater share of the world's raw materials. Consequently, the developing nations struggle for a more equitable share of these resources. Saying industrialization was synonymous with modernization had posed a serious threat to the world. The Empress continued that the outcome had contributed to a fragmentation of the value structure and a serious economic class stratification which had brought a greater gap between rural and urban areas.

### Opening of Handicrafts Center

On June 12th, Her Imperial Majesty inaugurated an exhibition of the best samples of Iranian handicrafts in the Central Library of Tehran University. The opening of this exhibition is a tribute to the special attention the Shahbanou has devoted to the development of the handicrafts industry in Iran. Initial preparations for this exhibition began in February of this year. Regional exhibitions of the best local handicrafts were formed, from which the most outstanding pieces were selected for the Tehran ExhibitCROWN PRINCE ATTENDS OPENING OF SUEZ CANAL



President Anwar Sadat of Egypt and His Imperial Highness Crown Prince Reza Pahlavi

On his first official visit abroad, His Imperial Highness, Crown Prince Reza Pahlavi attended ceremonies in Egypt between June 3 and June 6 for the opening of the Suez Canal and the establishment of a free zone in Port Said.

During the four-day State visit, the Crown Prince sailed with President Sadat through t the canal aboard the Egyptian naval destroyer, "October 6," made an aerial inspection of Cairo and the Nile, and unveiled a monument to Egyptian soldiers who died in past wars.

The Mayor of Port Said conferred the freedom of his city upon Prince Reza.

The presence of His Imperial Highness for the opening of the Suez Canal clearly illustrates the importance that Iran attaches to the waterway. It is hoped that the reopening of the Canal will contribute to the easing of Mideast hostilities and will accelerate Egypt's economic development. In addition, the shortened route will reduce freight costs for the world community, particularly the Eastern Mediterranean countries.

For Iran, the cost of shipping freight from Rotterdam to Khorramshahr should drop from \$15.4 per ton to \$9.22 per ton, a decrease of over \$6. Because of the rapidly increasing trade between Iran and the world community, the reopening of the Canal will be of great benefit in terms of time and money. In addition, the Iranian government has made arrangements to provide facilities for Iranian shippers to make maximum use of the Canal. According to the Irano-Egyptian economic cooperation agreement, there will be free port space and bunkering services for Iranian cargo and shipping.

Last year, it was announced that Egypt would receive a \$250 million loan from Iran for the reconstruction of Port Said. This is a part of Iran's \$1 billion aid commitment to Egypt.



His Imperial Highness Reza Fahlavi Crown Prince of Iran

H.I.H. PRINCESS ASHRAF AT INTERNATIONAL WOMEN'S YEAR CONFERENCE IN MEXICO CITY

At the International Women's Year Conference which convened in Mexico City on June 19th, Her Imperial Highness Princess Ashraf contributed \$2 million to the U.N. fund for the improvement of women's status in the world.

Of the total, \$500,000 was for the special U.N. Fund for Women's Year, \$500,000 was for the Asian Center for Training and Studies about Women, and \$1 million was for preparations for the establishment of a training and research center for women in Iran.

The Princess told the conference that the establishment of a new world economic order, based on equality and fair play, is the condition and the means of promoting the status of women. Women's lot, she said, was directly linked with the rate of their society's development. Discrimination against women, especially in the developing world, tended to become perpetuated as long as their countries suffered from the "unjust terms" of world trade. The legitimate complaints of women in highly industrialised countries proved that man's general outlook toward development must be reexamined, she pointed out.

In Iran, the Princess said, efforts to improve the lot of women and eliminate age-long discriminations against them started with the Shah-People Revolution in 1963. She conceded that changing an ancient nation's attitude toward women was not an easy task but added



Her Imperial Highness Princess Ashraf Pahlavi

that important steps in this direction had been taken and bastions of discrimination against women were falling one after another. She added:

"Concrete steps have to be taken soon to coordinate and promote efforts for the elimination of discrimination against women throughout the world."

One factor hindering such efforts was the lack of adequate accurate information about the exact status of women in each country, facilities provided for them and their needs.

Iran had suggested the establishment of a center for the collection and dissemination of such information in Asia, she said.

# TRANSPORTATION AND REDEVELOPMENT PLANNED

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Abadan-Khoramshahr Highway

In a speech to business managers in late May, Iranian Minister for Roads and Transport, Javad Shahrestani, announced details of plans for massive redevelopment and expansion of the nation's transport infrastructure.

By the end of the Fifth Development Plan in 1978, it is projected that thousands of miles of highways will be added to the nation's road network, port facilities will be greatly expanded and the rail-roads modernized and extended. During 1974, over 1,350 miles of main and secondary were completed and are now in use. Mr. Shahrestani said that at present, 13,000 miles of roads are under construction. Highway safety equipment will be installed at dangerous road sites and on mountainous highways, he added.

The Ministry's experts are discussing with Plan and Budget Organisation officials the establishment of a network of communication stations on these roads.

Plans are being considered for constructing a double-track railway system for Iran, and the use of electric trains is also being examined. A computer-controlled signalling system is to be introduced to handle train arrivals and departures and to ensure a high level of safety.

Referring to port facilities in Iran, the Minister stated that a jetty will be built in Khorramshahr to handle cement imports and 3,300 metres of wharves will be constructed in Bandar Shahpoor for handling general cargo. 1050 metres of these docks will be covered.

Expansion of the Bushehr port facility includes the construction of 1,000 metres of commercial wharves as well as docks for use by the Navy. Thirteen small ports will also be built at various sites along the Persian Gulf and the Sea of Oman, Mr. Shahrestani added.

### ELECTIONS

Parliamentary elections in Iran concluded on June 23rd as over 6½ million voters, about 55% of those eligible, cast their ba-lots. As a result of the election, 268 representatives were elected to the Lower House of Parliament (Majlis) and 30 Senators to the Senate. Another 30 Senators will be appointed at a later date by His Imperial Majesty, as provided in the

Iranian Constitution. Representatives elected to the Majlis included 13 women. In Tehran, only 6 deputies out of 27 were re-elected. The 4-year term of the Majlis will probably open by early September.

Jan. 1997.

His Imperail Majesty the Shahanshah Aryamehr described the results of the national election as a clear indication of the unity of the Iranian people and their determination to take part in the making of their country's future. The Monarch's remarks came at an impromptu news conference at the Rudaki Hall, Tehran's opera house.

In response to the newsmen who had asked his views of the Parliamentary elections which were held on June 20, the Shahanshah said:

"By voting for new faces, the Iranian people have given a clear and constructive response for the call for national resurgence."

The Shahanshah was referring to the new National Resurgence Party which was established upon his proposal and now encompasses all political and social groups in Iran. Expressing his satisfaction on the results of the elections, the Shahanshah noted that further steps should be taken toward strengthening the National Resurgence Party. The Shahanshah emphasized the existence of different tastes within the Party as a necessity and added that he expects disciplined Party members to reflect the thoughts which were inspired by the Shah and the People Revolution.